APPENDIX F

FOCUSED SPECIES SURVEY REPORTS

F1-2009 Focused Species Survey Reports

F2-2010 Focused Species Survey Reports

F3-2011 Focused Species Survey Reports

F4-2012 Focused Species Survey Reports

F5-2013 Focused Species Survey Reports

F6-2014 Focused Species Survey Reports

F1
2009 Focused Species Survey
Reports

FOCUSED BURROWING OWL HABITAT SURVEY
PROPOSED ALBERHILL SUBSTATION SITE
LAKE ELSINORE, CA

PREPARED FOR:



ADELINA MUÑOZ
SOUTHERN CALIFORNIA EDISON
BIOLOGIST
NATURAL AND CULTURAL RESOURCES GROUP
2244 WALNUT GROVE AVENUE
ROSEMEAD, CA 91770

PREPARED BY:



MATTHEW MALLÉ
AECOM
1461 EAST COOLEY DRIVE, SUITE 100
COLTON, CALIFORNIA 92324

DATE:
JANUARY 29, 2008

Certification: I hereby certify that the statements furnished herein and in the attached exhibits present all data and information required for this Biological Survey to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Matthew Mallé
matthew.malle@aecom.com

Date

Introduction

Earth Tech, Inc (Earth Tech) was contracted by Southern California Edison (SCE) to provide biological services in support of developing the proposed Alberhill Substation on Assessor Parcel Numbers (APN): 391120002, 391120015, 391120016, 391120022, 391120024, 391120026, 391160021, and 391160022. According to the Riverside County Integrated Plan (RCIP) Conservation Summary Report Generator, focused surveys for western burrowing owl (burrowing owl) (*Athene cunicularia hypugaea*) are required for all parcels except 391120015 and 391120016 (see Figure 1).

A schematic of the proposed Alberhill Substation layout has been provided in Appendix A

Purpose

The purpose of this report is to fulfill Part I [burrowing owl habitat assessment] of the three phase protocol-level survey requirements as described within the *Burrowing Owl Survey Instructions For the Western Riverside Multiple Species Habitat Conservation Plan Area* (Riverside County, 2006), and to document whether suitable habitat for burrowing owl exists within or adjacent to the Project Area.

Project Location and Environmental Setting

The Project Area is approximately 125 acres and is located within Temescal Valley, south of Corona, CA. The Project Area can be found on the Alberhill, CA 7.5 minute United States Geological Survey (USGS) topographic quadrangle (1980). The Project Area is located within the NW ¼ of Section 16, Township 5 South, Range 5 West, in an unincorporated portion of Lake Elsinore, CA. The approximate elevation range of the Project Area is 1,200 to 1,620 feet. The Project Area is located at 14116 Temescal Canyon Road, north of the road. Temescal Wash is located west of the Project Area boundary. The northern portion of the Project Area occurs within the southern slope of the foothills associated with Estelle Mountain, north of Lake Elsinore. The Project Area's southern boundary is defined by both Temescal Canyon Road and Concordia Ranch Road (see Figure 2).

Riverside County contains a variety of geographic land forms and is host to numerous sensitive biological resources. The Western Riverside County Multiple Species Habitat Conservation Plan indicates the Project Area is located within the western portion of the Riverside Lowlands Bioregion. This Bioregion consists of high levels of disturbance and urbanization with relatively arid climate resulting, in part, from the rain shadow cast by the Santa Ana Mountains (Riverside County, 2003) The Riverside Lowlands Bioregion is generally characterized by Riversidean sage scrub and grassland communities, both of which are represented on the project site.

Description of Suitable Burrowing Owl Habitat

The burrowing owl is a small, terrestrial owl of open country. It is primarily a grassland species, favoring flat, open grassland or gentle slopes and sparse shrubland habitat, but persists and even thrives in some landscapes highly altered by human activity. This species prefers annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. The overriding characteristic of suitable habitat appears to be burrows for roosting or nesting and, in California, burrowing owls are found in close association with California ground squirrel (*Spermophilus beecheyi*). Ground squirrels provide nesting and refuge burrows, and aid in the maintenance of short vegetation height, which provide foraging habitat and allow for visual detection of avian

predators by burrowing owls. In the absence of ground squirrel populations, burrowing owls may use standpipes, debris piles, rock piles, and other man-made structures for nesting (Shuford, W.D., and Gardali, T. editors, 2008).

Methods

On November 17-19, 2008, AECOM Biologist Matthew Mallé and Environmental Scientist Carl Rykaczewski traversed 100 percent of the Project Area categorizing habitat types within and adjacent to the proposed Project Boundary. Surveys were conducted during daylight hours, between 0800-1600 hours, and during environmental conditions favorable for conducting biological surveys with temperatures ranging from 60-85 degrees Fahrenheit, generally clear skies, and slight breezes (1-3 mph) from the southeast.

During the habitat assessment, potential and suitable burrowing owl habitat was noted. Presence of ground squirrel and general locations of ground squirrel burrows were also noted.

Results

At the time of the surveys, a majority of the Project Area was being used as an active horse ranch. The southern portion of the Project Area is considered to be developed. This area consists of a livestock stable, multiple livestock holding pens, various ranch support facilities, and three residential structures and is generally surrounded by a mixture of barren soil, manicured lawns, ornamental shrubs, and shade trees.

Portions of the developed area are less disturbed and more or less isolated from consistent human disturbances as a result of the ranching activities. These areas include large holding pens (one to several acres in size) and other open spaces that occur along the Project Area's eastern and western boundaries. These isolated parcels of land within the developed portion of the Project Area are either barren soil, contain construction debris/manure piles, or contain sparsely distributed non-native annual grassland species or highly disturbed (sparsely distributed, low growing vegetation due to past and/or present livestock grazing) coastal sage scrub habitat. Some of these isolated areas also contain a relatively significant ground squirrel population. Bolstered populations of ground squirrel within the developed portions of the ranch are suspected to be influenced by the availability and accessibility of livestock feed.

The northern portion of the Project Area contains undeveloped, steep, vegetated hills. The vegetation within the northern portion of the Project Area was noted as being generally dense, approximately 1-3 feet in height, and consisted of a fairly consistent mixture of non-native annual grassland species and Riversidean coastal sage scrub habitat. Ground squirrel and ground squirrel sign was generally absent from the northern portion of the Project Area; however, smaller rodent burrows (e.g., kangaroo rat and pocket mouse) were observed.

Although suitable and potentially suitable burrowing owl habitat exits within and adjacent to the Project Area, no burrowing owl or burrowing owl sign was observed during the habitat assessment.

A list of vegetation and wildlife species observed during the habitat assessment are included in Appendix B.

Conclusion and Recommendations

Suitable burrowing owl habitat occurs within select regions of Project Area. Isolated areas within the southern portion of the Project Area contain debris piles, sparsely vegetated annual grassland and low growing coastal sage scrub habitat, which provide essential habitat elements including suitable nesting and roosting habitat. These habitat elements coupled with the presence of significant ground squirrel populations and associated burrows, provides opportunity for the burrowing owl to be present within or adjacent to the Project Area during breeding season.

In addition, there is potential for the horse ranch operations and associated human disturbances to cease prior to the initiation of the proposed substation construction. The lack of human/livestock disturbance, and the availability to new open land could attract burrowing owls to the site, if it is allowed to sit fallow for an extended period of time.

Although the northern portion of the Project Area is more isolated, less disturbed, and may provide suitable foraging habitat for the burrowing owl, nesting burrowing owl are not expected to occur within this region of the Project Area. The dense vegetation associated with the steep hills does not provide the burrowing owl with the ability to visually detect predators and the lack of appropriate burrow sites within the northern portion of the Project Area does not provide suitable shelter or nesting sites for the burrowing owl.

Earth Tech recommends that Phase II (focused burrow surveys) and Phase III surveys (focused burrowing owl surveys) as directed within the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* be conducted within identified suitable and potentially suitable habitat during Spring 2009 (see Figure 3). The Riverside County Protocol suggests Phase II and III be conducted during the burrowing owl breeding season (March 1-August 31).

References:

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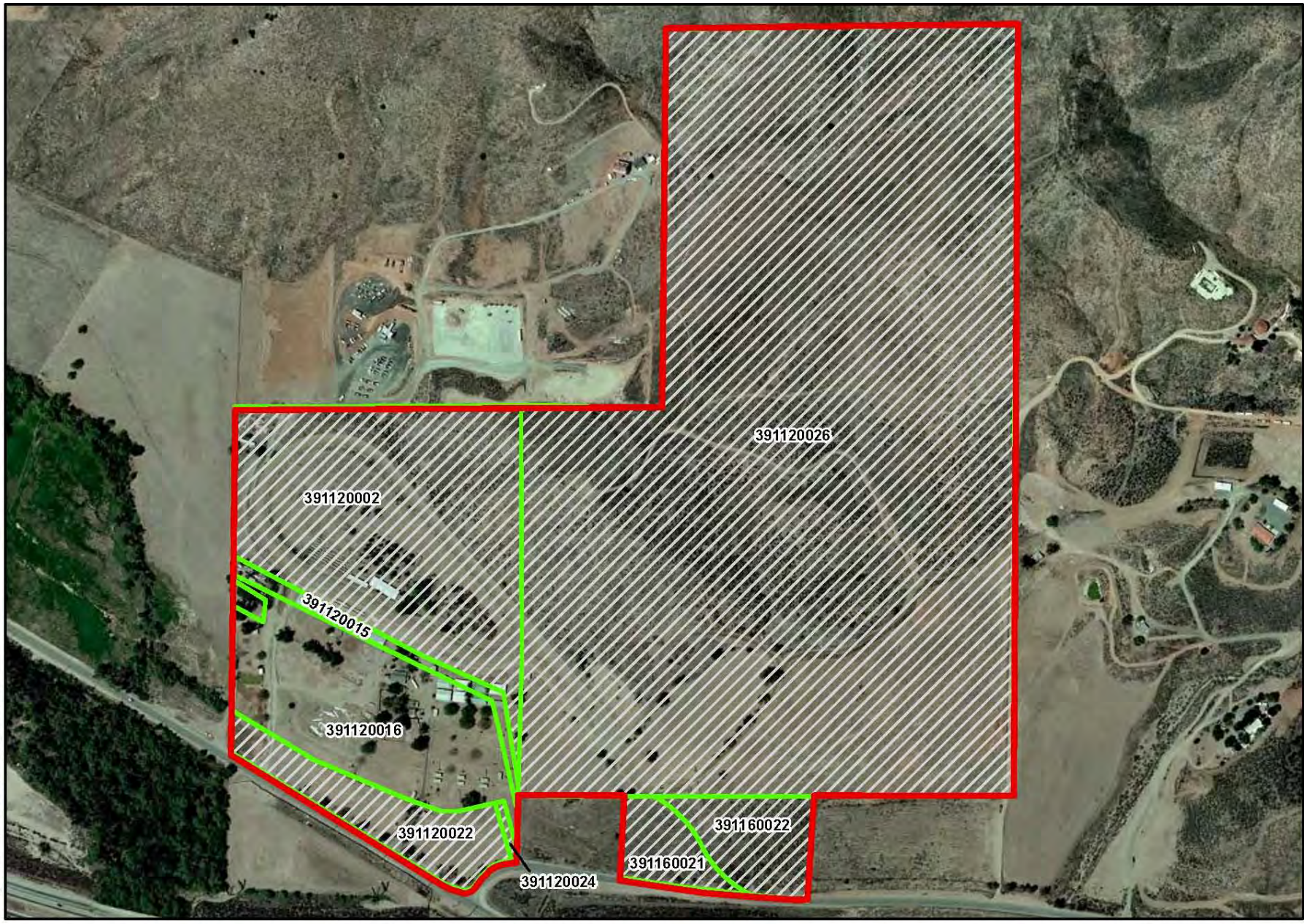
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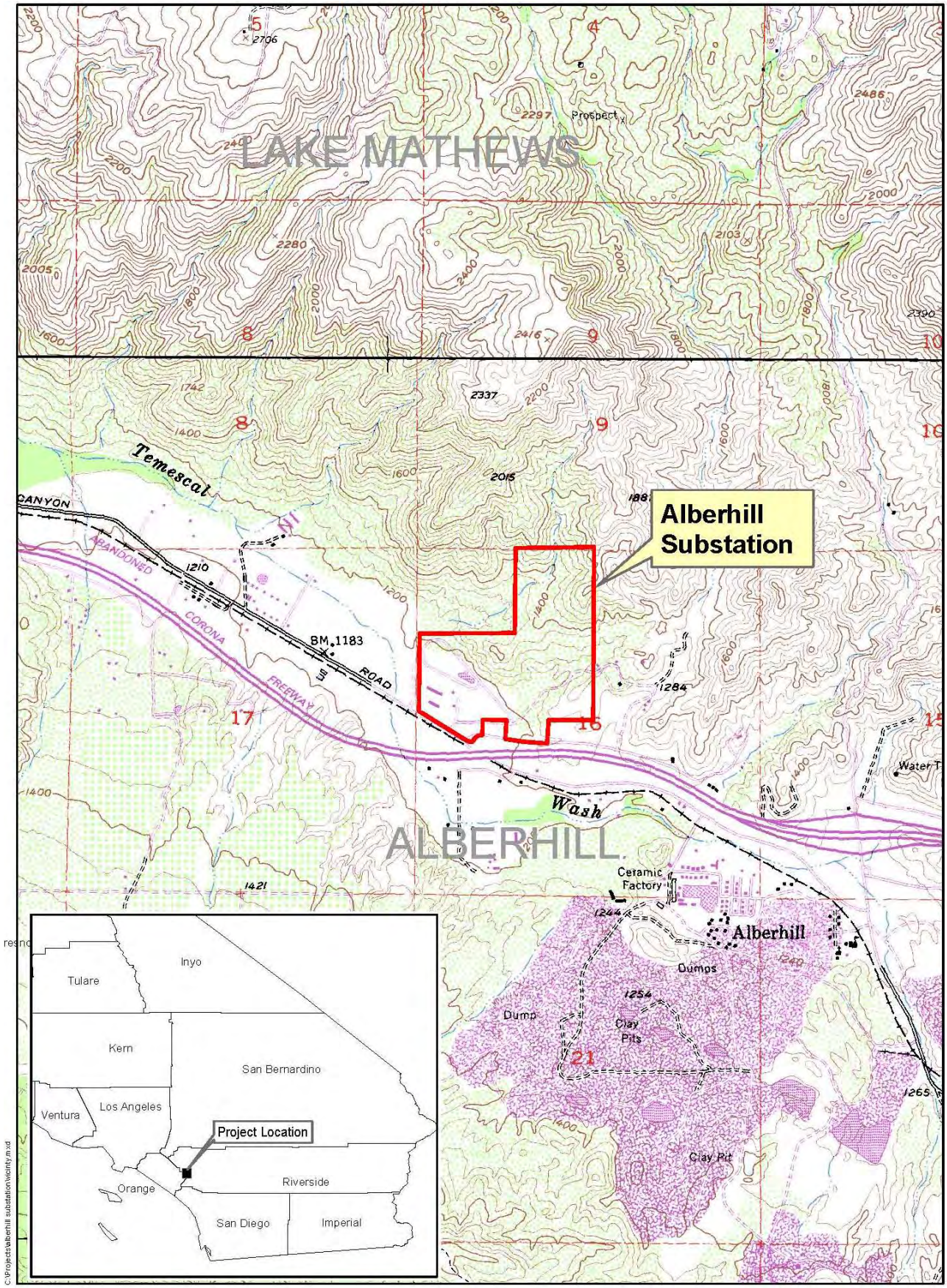
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Parcels requiring focused burrowing owl surveys as mandated by the Western Riverside County Multiple Species Habitat Conservation Plan

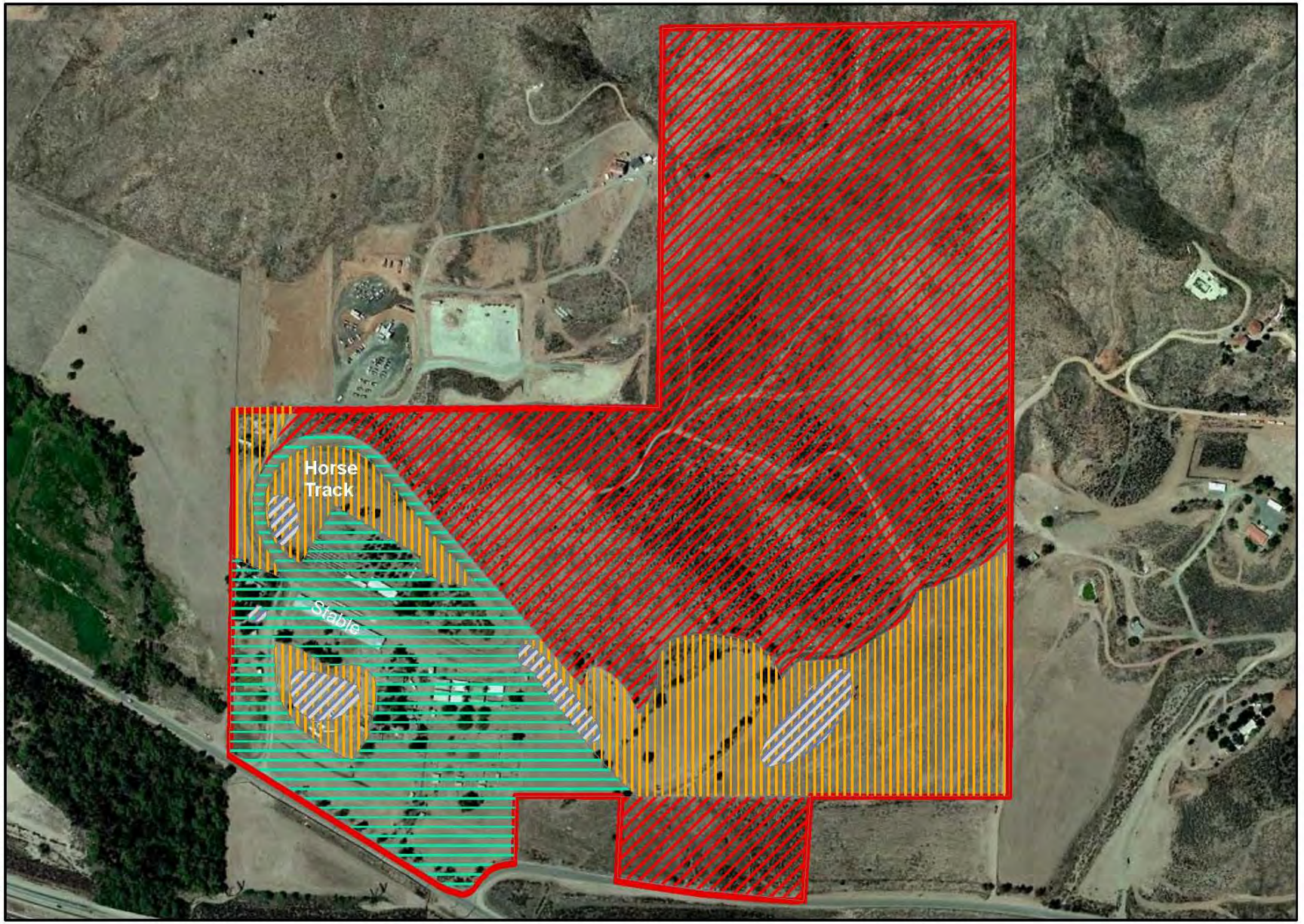
Riverside County Accessor Parcel Numbers for Proposed Alberhill Substation Site Requiring Focused Burrowing Owl Surveys Riverside County, CA

Figure 1



Project Location
Alberhill Substation Site
Riverside County, CA

Figure 2



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200 100 0 200 Feet

Explanation

- Suitable Burrowing Owl Habitat
- Potential Suitable Habitat (contains neccessary habitat elements but subjected to consistant human and livestock related impacts)
- No Suitable Habitat (dense coastal sage scrub/ annual grassland habitat)
- General Location of Significant Ground Squirrel Burrowing Activity

Western Burrowing Owl Habitat Map, Alberhill Substation Site Riverside County, CA

Figure 3

Appendix A

Proposed Alberhill Substation Layout


1" = 50'
N
C/L TEMESCAL CANYON RD
C/L CONCORDIA RANCH RD
LOVE LN.
IVYGLEN NO. 2
IVYGLEN NO. 1
CONTROL BLDG.
ADMIN. BLDG.
MAINT. AREA
SPEC. BASIN
500KV GIS SEC. A
500KV GIS SEC. B
SHUNT CAP.
500KV

Appendix B

Plant and Wildlife Lists of Species Observed During the Survey Conducted of the Proposed Alberhill Substation Site, November 17-19, 2008

Appendix B: Plants Species Observed During Surveys of the Proposed Alberhill Substation Site, 17-19 November 2008

chamise	*Adenostoma fasciculatum*
fiddle neck	*Amsinkia* sp.
California sagebrush	*Artemisia californica*
tarragon	*Artemisia dracunculus*
slender oats	*Avena barbata*
wild oats	*Avena fatua*
mulefat	*Baccharis salicifolia*
desert brickell	*Brickellia desertorum*
ripgut	*Bromus diandrus*
red brome	*Bromus madritensis* ssp. *rubens*
cheatgrass	*Bromus tectorum*
catalpa	*Catalpa bignonioides*
tocalote	*Centaurea melitensis*
horseweed	*Conyza Canadensis*
croton	*Croton setigerus*
cypress	*Cupressus* sp.
Bermuda grass	*Cynodon dactylon*
Jimson weed	*Datura wrightii*
blue dicks	*Dichelostemma capitatum*
brittle bush	*Encelia farinosa*
Palmer's goldenbush	*Ericameria palmeri*
California buckwheat	*Eriogonum fasciculatum*
eucalyptus	*Eucalyptus* sp.
fig	*Ficus* sp.
common sunflower	*Helianthus* sp.
salt heliotrope	*Heliotropium curassavicum*
Kellogg's tarweed	*Hemizonii kelloggii*
short-pod mustard	*Hirschfeldia incana*
goldenbush	*Isocoma menziesii*
California black walnut	*Juglans nigra*
English walnut	*Juglans regia*
California aster	*Lessingia filaginifolia*
California broom	*Lotus scoparius*
laurel sumac	*Malosma laurina*
horehound	*Marrubium vulgare*
mulberry	*Morus alba*
oleander	*Nerium oleander*
tree tobacco	*Nicotina glauca*
prickly pear	*Opuntia littoralis*
valley cholla	*Opuntia parryi*
pine	*Pinus* sp.
cottonwood	*Populus* sp.
purslane	*Portulaca oleracea*
holly-leafed cherry	*Prunus ilicifolia*
spiny redberry	*Rhamnus ilicifolia*
Goodding's willow	*Salix gooddingii*
tumble weed	*Salsola tragus*
white sage	*Salvia apiana*

chia	*Salvia columbariae*
Mexican elderberry bush	*Sambucus mexicana*
Peruvian pepper tree	*Schinus molle*
bulrush	*Scirpus* sp.
nightshade	*Solanum* sp.
wire lettuce	*Stephanomeria exigua*
tamarisk	*Tamarix* sp.
cattail	*Typha* sp.
fan palm	*Washingtonia* sp.

Appendix B: Bird List for Surveys Conducted at the Proposed Alberhill Substation Site, 17-19 November 2008

Galliformes - Gallinaceous Birds
Odontophoridae - New World Quail
California quail *Callipepla californica*

Falconiformes - Diurnal Birds of Prey
Accipitridae - Hawks, Kites, Eagles, and Allies
northern harrier *Circus cyaneus*
Cooper's hawk *Accipiter cooperii*
red-shouldered hawk *Buteo lineatus*
red-tailed hawk *Buteo jamaicensis*

Charadriiformes - Shorebirds, Gulls, Auks, and Allies
Charadriidae - Lapwings and Plovers
killdeer *Charadrius vociferous*

Columbiformes - Pigeons, and Doves
Columbidae - Pigeons and Doves
mourning dove *Zenaida macroura*

Apodiformes - Swifts, and Hummingbirds
Trochilidae - Hummingbirds
Anna's hummingbird *Calypte anna*

Passeriformes - Passerine Birds
Tyrannidae - Tyrant Flycatchers
black phoebe *Sayornis nigricans*
Say's phoebe *Sayornis saya*
Cassin's kingbird *Tyrannus vociferans*

Corvidae - Crows and Jays
American crow *Corvus brachyrhynchos*

Aegithalidae - Long-tailed Tits and Bushtits
bushtit *Psaltriparus minimus*

Troglodytidae - Wrens
rock wren *Salpinctes obsoletus*
Bewick's wren *Thryomanes bewickii*
house wren *Troglodytes aedon*

Regulidae - Kinglets
ruby-crowned kinglet *Regulus calendula*

Sturnidae - Starlings
European starling *Sturnus vulgaris* - I

Motacillidae - Wagtails and Pipits

American pipit	*Anthus rubescens*

Parulidae - Wood-Warblers

yellow-rumped warbler	*Dendroica coronata*
common yellowthroat	*Geothlypis trichas*

Emberizidae - Emberizids

California towhee	*Pipilo crissalis*
white-crowned sparrow	*Zonotrichia leucophrys*
dark-eyed junco	*Junco hyemalis*

Icteridae - Blackbirds

red-winged blackbird	*Agelaius phoeniceus*
Brewer's blackbird	*Euphagus cyanocephalus*
brown-headed cowbird	*Molothrus ater*

Fringillidae - Fringilline and Cardueline Finches and Allies

house finch	*Carpodacus mexicanus*
lesser goldfinch	*Carduelis psaltria*

Appendix B: Other Wildlife Species Observed During Surveys of the Proposed Alberhill Substation Site, 17-19 November 2008

Invertebrates

tarantula	*Aphonopelma* sp.

Herptofauna

side-blotched lizard (observation)	*Uta stansburiana*

Mammals

coyote (scat)	*Canis latrans*
domestic dog (scat)	*Canis familiaris*
desert woodrat	*Neotoma lepida*
California ground squirrel (observed and burrows)	*Spermophilus beecheyi*
desert cottontail	*Sylvilagus audubonnii*

Appendix C

Photographs of the Habitat Present on the Proposed Alberhill Substation Site, November 17-19, 2008



Suitable burrowing owl habitat, west of horse track area, aspect north. This area is also adjacent to an off-site pasture to the west which could provide additional suitable owl habitat.



Construction debris pile located in the northern portion of the Project Area, west of the horse track area. Debris piles could provide refuge or shelter for burrowing owls and should be inspected during focused burrow surveys.



Northern Portion of Project Area. Dense, tall annual grassland/coastal sage scrub habitat within steep topography. Burrowing owl unlikely to be associated with this habitat type.



Northern Portion of Project Area. Dense, tall annual grassland/coastal sage scrub habitat within steep topography. Burrowing owl unlikely to be associated with this habitat type.



Man-made drainage southwest of stable area. Ground squirrel burrows were noted as occurring in the banks of the drainage.



Manure/landscaping debris piles south of stable area. Ground squirrels were observed within this area and debris piles could provide refuge/shelter for the burrowing owl.



One of the larger corrals occupied by horses. This corral does not currently provide suitable burrowing owl habitat, but could transition into habitat if allowed to sit fallow after human-related/ranching activities have ceased.



Eastern portion of Project Area, aspect west. Foreground shows sparsely vegetated open land which provides potential suitable habitat for the burrowing owl.



Suitable burrowing owl habitat within livestock corral on east side of Project Area. Photograph shows multiple ground squirrel burrows, at the base of an earthen ledge, within the corral area.

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FOCUSED BURROWING OWL BURROW AND BURROWING OWL SURVEY
PROPOSED ALBERHILL SUBSTATION SITE
LAKE ELSINORE, CA

PREPARED FOR:



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Certification: I hereby certify that the statements furnished herein and in the attached exhibits present data and information required for this Biological Survey to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

MATTHEW MALLÉ
MATTHEW.MALLE@AECOM.COM

DATE:
MAY 28, 2009

Introduction

AECOM was contracted by Southern California Edison (SCE) to provide biological services in support of developing the proposed Alberhill substation on Assessor Parcel Numbers (APNs): 391-120-002, 391-120-015, 391-120-016, 391-120-022, 391-120-024, 391-120-026, 391-160-021, and 391-160-022. According to the Riverside County Integrated Plan (RCIP) Conservation Summary Report Generator, focused surveys for western burrowing owl (*Athene cunicularia hypugaea*) are required for all parcels except 391-120-015 and 391-120-016 (see Figure 1). Part I [burrowing owl habitat assessment] of the three-part protocol-level survey requirements as described within the *Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area* (County of Riverside, 2006) was conducted November 17-19, 2008. The Part I report concluded that suitable habitat for burrowing owl existed on and adjacent to the Project Area and recommended that Part II(a) and Part II(b) surveys (focused burrow surveys and focused burrowing owl surveys, respectively) be conducted within identified suitable and potentially suitable habitat during Spring 2009.

A schematic of the proposed Alberhill substation layout has been provided in Appendix A

Purpose

The purpose of this report is to fulfill Part II(a) and Part II(b) of the three-part protocol-level survey requirements as described within the *Burrowing Owl Survey Instructions For the Western Riverside County Multiple Species Habitat Conservation Plan Area* (County of Riverside, 2006), and to document the findings of the two surveys which took place during the months of April and May 2009.

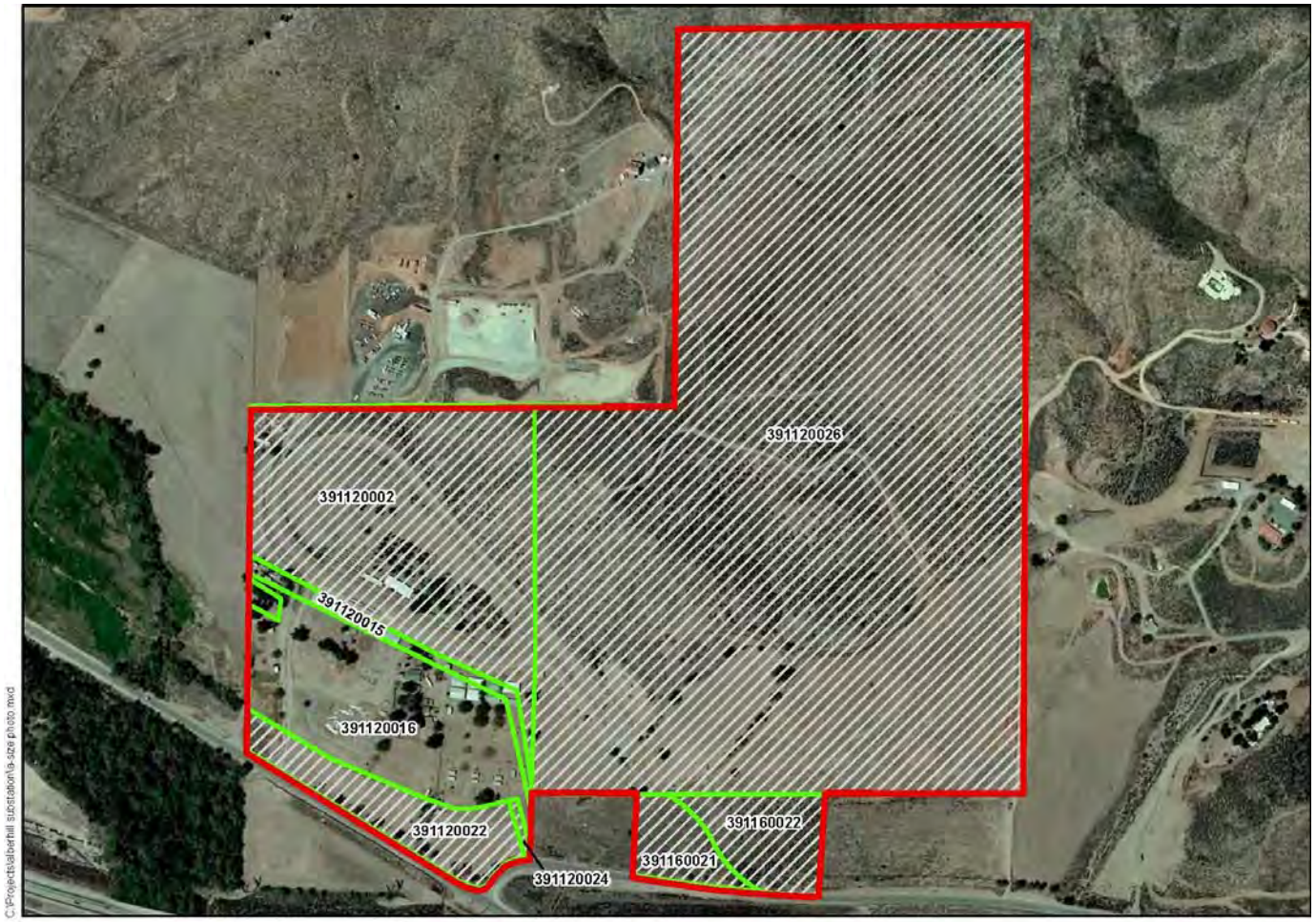
Description of Burrowing Owl and Burrowing Owl Habitat

The burrowing owl is a small ground-dwelling owl. The owl is long-legged and short-tailed, with relatively long, narrow wings, and a flat head with no ear tufts. Distinguishing markings on the burrowing owl include pale eyebrows, a white throat, and a spotted dark brown and buffy breast (Sibley, 2000). Burrowing owls are comparatively easy to see because they are often active in daylight, and are surprisingly bold and approachable. The females are usually darker than the males (The Institute for Bird Populations, 2007).

The burrowing owl prefers annual and perennial grasslands, typically with sparse or nonexistent, tree or shrub canopies (covering less than 30 percent of the ground surface), but persists and even thrives in some landscapes highly altered by human activity. The overriding characteristic of suitable habitat appears to be burrows for roosting or nesting, and in California, burrowing owls are found in close association with California ground squirrel (*Spermophilus beecheyi*). Ground squirrels provide nesting and refuge burrows, and aid in the maintenance of short vegetation height, which provides foraging habitat and allows for visual detection of avian predators by burrowing owls. In the absence of ground squirrel populations, burrowing owls may use standpipes, debris piles, rock piles, and other man-made structures for nesting (Shuford, W.D., 2008).

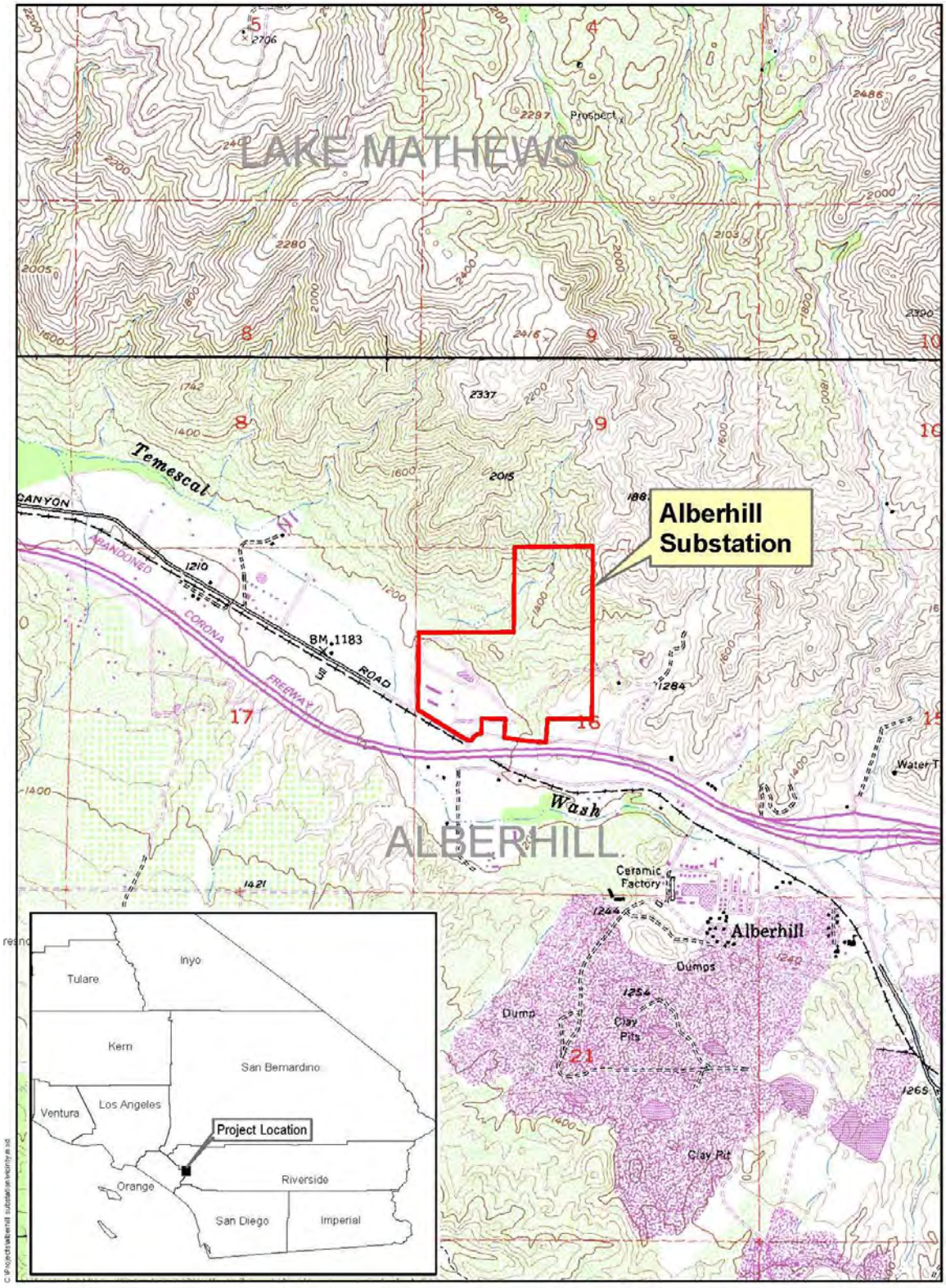
Project Location and Environmental Setting

The Alberhill substation site (Project Area) is approximately 125 acres and is located within the Temescal Valley, south of Corona, California. The Project Area can be found on the Alberhill, CA 7.5 minute United States Geological Survey (USGS) topographic quadrangle (1980). The Project Area is located within the northwest ¼ of Section 16, Township 5 South, Range 5 West, in an unincorporated portion of Lake Elsinore, CA. The approximate elevation range of the Project Area is 1,200 to 1,620 feet. The Project Area is located at 14116 Temescal Canyon Road. The Temescal Wash is located west of the Project Area boundary. The foothills of the Peninsular Range, Gavilan Hills region, make up the Project Area's northern portion, and are present northeast, north, and west of the Project Area. The Project Area's southern boundary is defined by both Temescal Canyon Road and Concordia Ranch Road (see Figure 2).



Riverside County Accessor Parcel Numbers for Proposed Alberhill Substation Site Requiring Focused Burrowing Owl Surveys Riverside County, CA

Figure 1



Project Location
Alberhill Substation Site
Riverside County, CA

Figure 2

Riverside County contains a variety of geographic land forms and is host to numerous sensitive biological resources. The Western Riverside County Multiple Species Habitat Conservation Plan indicates the Project Area is located within the western portion of the Riverside Lowlands Bioregion. This bioregion consists of high levels of disturbance and urbanization with relatively arid climate resulting, in part, from the rain shadow cast by the Santa Ana Mountains (Riverside County, 2003) The Riverside Lowlands Bioregion is generally characterized by Riversidean sage scrub and grassland communities.

A majority of the Project Area's southern portion is developed and contains facilities associated with horse ranching activities (corrals, stables, housing, etc.). The northern portion of the Project Area contains steep hillsides vegetated with a mosaic of non-native annual grasslands and pockets of coastal sage scrub and chaparral vegetation communities.

Part II (a) Focused Burrowing Owl Burrow Surveys

Methods

Systematic pedestrian surveys appropriately spaced to allow 100 percent visual coverage of all suitable burrowing owl habitat were implemented. All suitable natural or man-made burrows observed during the survey were recorded with a global positioning system (GPS) device, and representative photographs of selected burrow locations were collected for reporting purposes.

In addition to identifying suitable burrow locations, the biologist conducting the focused burrow surveys also inspected each burrow location for the following burrowing owl sign: white droppings near the mouth of encountered burrows or any perch location adjacent to the burrow opening, the presence of pellets (usually comprised of insect remains, but also often with fur and skeletal material from small mammals), bones from small mammals, cloth, paper and other litter, as well as dried dog, horse or cow droppings (The Institute for Bird Populations, 2007).

Results

On April 14, 2009, AECOM Biologist Matthew Mallé surveyed the suitable habitat identified during Part I surveys within the Project Area in order to identify all suitable natural or man-made burrows present.

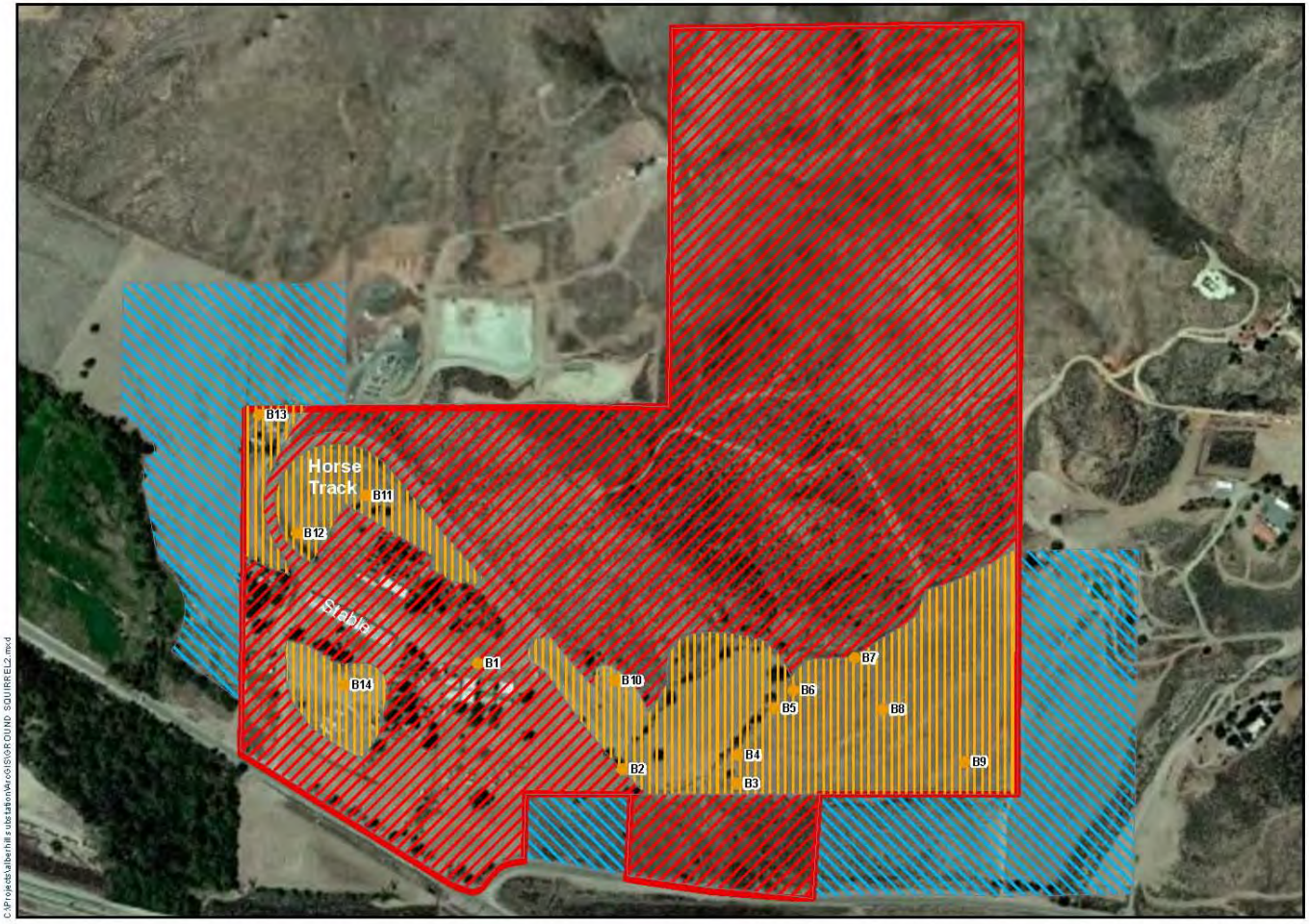
The survey for the burrowing owl burrows was conducted between the 1600 and 1800 hours. The survey was conducted within environmental conditions appropriate for identifying burrowing owl and other wildlife species, with temperatures ranging from the low to mid 60s.

A total of 14 suitable natural and man-made burrows or burrow complexes were identified during the focused burrow survey (see Figure 3). No burrowing owls or burrowing owl sign were observed during Part II (a) surveys. A description of each burrow location is described below.

Burrow complex B1 consisted of six ground squirrel burrows observed within the earthen berm located along the southeast portion of the horse race track. All six ground squirrel burrows were active (ground squirrel tracks and scat) and ground squirrels were observed using a few of the burrows for cover during the survey. The earthen berm was generally barren, however a dense patch of London rocket (*Sisymbrium irio*) was observed adjacent to (east of) the burrow complex location.

A second burrow (B2) complex, consisting of three ground squirrel burrows, was observed south of a large horse pen located in the eastern portion of the site. All three ground squirrel burrows were active. These burrows were located adjacent to (east of) a walnut tree (*Juglans* sp.).

A number of burrows (B3-B9) were encountered within an area which was identified as having been used as a steer pen, although no livestock were observed within the pen during the Part II (a or b) surveys. Burrows B3-B8 are located along the lower to mid northwest facing slope of the pen and burrow B9 was located on the lower area of southeast slope of the pen area. All of the burrows within the pen area were active and many ground squirrels were observed using the burrows for cover during the survey. The



Explanation

- Suitable Burrowing Owl Habitat
- No Suitable Habitat (dense coastal sage scrub/ annual grassland habitat)
- Approximate 500 Foot Buffer Zone Surveyed with Binoculars
- California Ground Squirrel Burrows Observed Within Potential Burrowing Owl Habitat

200 100 0 200 Feet

California Ground Squirrel Burrows Observed Within Potential Burrowing Owl Habitat Alberhill Substation Site Riverside County, CA

Figure 3

general vegetation description within the steer pen can be classified as disturbed Riversidean coastal sage scrub habitat. The majority of vegetation that was observed on the western slope of this parcel appeared to have been grazed by livestock, and the woody plant species were re-sprouting from their bases. The northwestern slope of the parcel was generally comprised of native shrubby vegetation. Species noted within the pen area included California buckwheat (*Eriogonum fasciculatum)*, California broom (*Lotus scoparius*), and California sagebrush (*Artemisia californica*). Native annuals included various tarweeds (*Hemizonia fasciculata*, *H. kelloggii*, and *H. paniculata*). In addition, two Opuntia species were observed, prickly pear (*Opuntia littoralis)* and valley cholla (*Opuntia parryi*) and were noted to be the most prominent (least disturbed) plants within the western portion of this parcel. Brittlebush (*Encelia farinosa*) was observed along the ridgeline and eastern slope of the pen area. Some individual brittlebush plants were observed on the western slope, but on the eastern side brittlebush was a dominant species and increased in density in the extreme east and southeast portions of this parcel.

Burrow location B10 is located within a manure stockpile area, and approximately ten occupied ground squirrel burrows were observed at this location. A number of ground squirrels were observed fleeing the area during the survey. The stockpile area appeared to be subject to many ranch related activities; a continued supply of manure was deposited on the site during the burrowing owl surveys. The vegetation in the area surrounding the manure stock piles consisted of non-native annuals, the most notable species being London rocket and short-pod mustard (*Hirschfeldia incana*).

Burrow location B11 is located within the interior portion of the horse race track. Approximately eight occupied ground squirrel burrows were observed north of the northwest corner of the large rooster pen area. These burrows were adjacent to an olive tree (*Olea* sp.). Vegetation in the area surrounding the burrows consisted of moderately dense (>50 percent ground cover), non-native annual and native perennial shrubby species: short pod mustard, tocalote (*Centaurea melitensis*), Filaree (*Erodium* sp.), fiddleneck (*Amsinckia* sp.), California aster (*Lessingia filaginifolia*), and California buckwheat.

Burrow location B12 is also located within the interior of the horse track area. Approximately ten occupied ground squirrel burrows were observed in a disturbed field area west of the western fence line of the previously described rooster pen. Vegetation in this area was similar to that of burrow location B11.

Burrow location B13 is located in the lower northwest corner of the Project Area. A large debris pile was observed on a concrete foundation of a former building. The debris pile consists of large fiberglass panels and other construction related debris (wood and concrete). A number of openings in the debris pile were noted as being suitable man-made burrow locations.

Burrow location B14 is located south of the stable area and many active ground squirrel burrows were associated with several soil/manure stockpiles. This area was also subject to ranch related activities (e.g., the continued stockpiling of manure and soil). The vegetation in the area surrounding the soil/manure stock piles consisted of London rocket and short-pod mustard, and a variety of mowed non-native grasses. It should be noted that burrow location B14 is within APN 391-120-016, which was identified as one the parcels not requiring focused burrowing owl surveys. Because this area was on-site, adjacent to other areas considered to be suitable burrowing owl habitat and contained ground squirrel burrows, it was included as part of the survey area for burrowing owl.

Part II (b) Focused Burrowing Owl Surveys

Methods

Prior to initiating pedestrian surveys within the identified suitable on-site habitat, all visible burrow locations were surveyed off-site with binoculars from Concordia Ranch and Temescal Canyon Roads. A systematic pedestrian survey was then implemented within the on-site suitable burrowing owl habitat. Each pedestrian survey was appropriately spaced to allow 100 percent visual coverage of the ground surface. Each natural burrow and man-made burrow was inspected for burrowing owl or burrowing owl sign.

In addition to on-site surveys, all off-site areas adjacent to suitable habitat on site were surveyed by scanning the ground surface and perch sites with binoculars for the presence of burrowing owl. One area located south and east of the southeast corner of the Project Area was noted as being disturbed and sparsely vegetated coastal sage scrub and dense non-native annual grassland habitat. The off-site area located adjacent to the Project Areas southern boundary can be classified as disturbed, dense non-native annual grassland. The off-site areas along the Project Area's lower western boundary are classified as low growing non-native annual grassland and were being used as a grazing area for horses and cattle during the survey.

All surveys were conducted within the one hour before sunrise to two hours after the sunrise survey window.

Results

On April 24, May 15, and May 18-19, 2009, AECOM Biologist Matthew Mallé surveyed the suitable habitat identified during Part I surveys and inspected natural and man-made burrows identified during Part II (a) surveys for the presence of burrowing owl within the Project Area.

The four separate focused burrowing owl surveys were conducted within environmental conditions appropriate for identifying burrowing owl and are presented in the table below.

Weather Conditions

Date	Sunrise	Survey Time	Weather Conditions
24 April 09	0611 hrs	0550-0810 hrs	58/60, overcast, 0-3 mph wind, SE
15 May 09	0551 hrs	0600-0800 hrs	58/60, clear, still
18 May 09	0549 hrs	0600-0800 hrs	59/61, hazy, patchy cloud coverage, still
19 May 09	0548 hrs	0600-0800 hrs	64/69, hazy, patchy cloud coverage, still

No burrowing owls or burrowing owl sign were observed during any of Part II (b) focused burrowing owl surveys.

Conclusions and Recommendations

Based on the negative survey results for the Part II (b) surveys, there are no burrowing owls currently occupying the proposed Alberhill substation site. Although, survey results were negative, Part I and Part II (a) surveys confirmed that suitable habitat for burrowing owl exists within and adjacent to the Project Area and the site contains multiple natural and man-made burrows that could potentially become occupied by burrowing owl. Because the potential exists for burrowing owl to occupy the site, the AECOM biologist recommends that a pre-construction survey be conducted within 30-days prior to ground disturbance to avoid a direct take of burrowing owl.

The following are additional avoidance, minimization, and mitigation measures which could be implemented if burrowing owls are detected during pre-construction burrowing owl surveys:

- Occupied burrowing owl burrows should not be disturbed during the nesting season (March 1-August 31).

- If an occupied burrow is encountered during the pre-construction burrowing owl survey, a buffer zone (250 feet), excluding all construction related activities, should be established around the burrow and a project biologist should be tasked with monitoring the breeding pair of owl to determine if other avoidance and minimization measures are necessary.

- To offset the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres of foraging habitat per breeding pair or unpaired resident burrowing owl should be acquired and

permanently protected. The protected lands should be adjacent to occupied burrowing owl habitat.

- When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected land site.

- If owl relocation is required, passive relocation techniques could be implemented during the non-breeding months.

- The Department of Fish and Game should be consulted before setting aside conserved lands, creation of artificial burrows and if passive relocation techniques are being considered to mitigate project loss of occupied burrowing owl burrows or burrowing owl habitat.

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Appendix A
Proposed Alberhill Substation Layout


1" = 50'
C/L TEMESCAL CANYON RD
C/L CONCORDIA RANCH RD
LOVE LN.
FOOTPATH
SWALE
CONTROL BLDG.
MAINT. BLDG.
MAINT AREA
500kV GIS SEC. A
500kV GIS SEC. B
SHUNT CAP.
500kV
30' R/W
8'-0" DR
TEMP. EASEMENT

Appendix B
Species Lists

Appendix B: Bird List for Surveys Conducted at the Proposed Alberhill Substation Site, November 2008 - May 2009

Galliformes - Gallinaceous Birds
Odontophoridae - New World Quail
California Quail *Callipepla californica*

Falconiformes - Diurnal Birds of Prey
Accipitridae - Hawks, Kites, Eagles, and Allies
Northern Harrier *Circus cyaneus*
Cooper's Hawk *Accipiter cooperii*
Red-shouldered Hawk *Buteo lineatus*
Red-tailed Hawk *Buteo jamaicensis*

Charadriiformes - Shorebirds, Gulls, Auks, and Allies
Charadriidae - Lapwings and Plovers
Killdeer *Charadrius vociferus*

Columbiformes - Pigeons, and Doves
Columbidae - Pigeons and Doves
Mourning Dove *Zenaida macroura*

Apodiformes - Swifts, and Hummingbirds
Trochilidae - Hummingbirds
Anna's Hummingbird *Calypte anna*

Passeriformes - Passerine Birds
Tyrannidae - Tyrant Flycatchers
Black Phoebe *Sayornis nigricans*
Say's Phoebe *Sayornis saya*
Cassin's Kingbird *Tyrannus vociferans*

Corvidae - Crows and Jays
American Crow *Corvus brachyrhynchos*

Aegithalidae - Long-tailed Tits and Bushtits
Bushtit *Psaltriparus minimus*

Troglodytidae - Wrens
Rock Wren *Salpinctes obsoletus*
Bewick's Wren *Thryomanes bewickii*
House Wren *Troglodytes aedon*

Regulidae - Kinglets
Ruby-crowned Kinglet *Regulus calendula*

Sturnidae - Starlings
European Starling *Sturnus vulgaris* - I

Motacillidae - Wagtails and Pipits
American Pipit *Anthus rubescens*

Parulidae - Wood-Warblers
Yellow-rumped Warbler *Dendroica coronata*
Common Yellowthroat *Geothlypis trichas*

Emberizidae - Emberizids
California Towhee *Pipilo crissalis*
White-crowned Sparrow *Zonotrichia leucophrys*
Dark-eyed Junco *Junco hyemalis*

Icteridae - Blackbirds
Red-winged Blackbird *Agelaius phoeniceus*
Brewer's Blackbird *Euphagus cyanocephalus*
Brown-headed Cowbird *Molothrus ater*

Fringillidae - Fringilline and Cardueline Finches and Allies
House Finch *Carpodacus mexicanus*
Lesser Goldfinch *Carduelis psaltria*

Appendix B: Other Wildlife Species Observed During Surveys of the Proposed Alberhill Substation Site, November 2008 - May 2009

Invertebrates

tarantula	*Aphonopelma* sp.

Herptofauna

side-blotched lizard (observation)	*Uta stansburiana*

Mammals

coyote (scat)	*Canis latrans*
domestic dog (scat)	*Canis familiaris*
desert woodrat	*Neotoma lepida*
California ground squirrel (observed and burrows)	*Spermophilus beecheyi*
desert cottontail	*Sylvilagus audubonii*

Plant Species Observed During Surveys of the Proposed Alberhill Substation Site, November 2008 - May 2009

Monocots

Liliaceae	
Allium haematochiton	red-skinned onion
Bloomeria crocea	common goldenstar
Calochortus splendens	lilac mariposa lily
Dichelostemma capitatum ssp. *capitatum*	bluedicks
Poaceae	
Avena barbata	slender wild oats
Avena fatua	common wild oats
Avena sativa	cultivated oats
Brachypodium distachyon	false brome
Bromus diandrus	ripgut
Bromus hordeaceus	soft chess
Bromus madritensis ssp. *rubens*	red brome
Bromus tectorum	cheatgrass
Hordeum murinum	barley
Lamarckia aurea	golden top
Leymus condensatus	giant rye grass
Nassella (= Stipa) pulchra	purple needlegrass
Poa secunda	one-sided blue grass
Vulpia microstachys var. *pauciflora*	Pacific fescue
Vulpia (= Festuca) myuros	rat-tail fescue

Dicots

Anacardiaceae	
Malosma laurina	laurel sumac
Apiaceae	
Bowlesia incana	bowlesia
Daucus pusillus	wild carrot
Asteraceae	
Artemisia californica	California sagebrush
Artemisia dracunculus	tarragon
Baccharis salicifolia	mulefat
Brickellia desertorum	desert brickel
Centaurea melitensis	tocalote

Chaenactis artemisiifolia	white pincushion
Encelia farinosa	brittlebush
Ericameria palmeri	Palmer's goldenbush
Eriophyllum confertiflorum	yellow yarrow
Gnaphalium californicum	California everlasting
Helianthus gracilentus	slender sunflower
Hemizonia fasciculata	slender tarweed
Hemizonia kelloggii	Kellogg's tarweed
Hemizonia (= *Deinandra*) *paniculata*	paniculate tarweed
Isocoma menziesii	Menzies' goldenbush
Lasthenia gracilis	needle goldfields
Layia platyglossa	tidytips
Lessingia filaginifolia	common sandaster
Osmadenia tenella	three spot
Boraginaceae	
Amsinckia menziesii var. *intermedia*	fiddleneck
Cryptantha intermedia	common cryptantha
Pectocarya linearis ssp. *Ferocula*	slender linearis
Brassicaceae	
Hirschfeldia incana	shortpod mustard
Lepidium lasiocarpum	shaggyfruit pepperweed
Lepidium nitidum	common peppergrass
Sisymbrium irio	London rocket
Cactaceae	
Opuntia littoralis	pricklypear
Opuntia parryi	valley cholla
Caprifoliaceae	
Sambucus mexicana	Mexican elderberry
Chenopodiaceae	
Salsola sp.	Russian thistle
Convolvulaceae	
Calystegia macrostegia	morning glory
Cucurbitaceae	
Marah macrocarpus	wild cucumber

Crassulaceae	
Crassula connata	pygmyweed
Euphorbiaceae	
Eremocarpus setigerus	doveweed
Chamaesyce albomarginata	rattlesnake weed
Ricinus communis	castorbean
Fabaceae	
Lotus scoparius	California broom
Lotus strigosus	bishop lotus
Lupinus bicolor	lupine
Geraniaceae	
Erodium botrys	filaree
Hydrophyllaceae	
Phacelia cicutaria var. *hispida*	caterpillar phacelia
Phacelia distans	distant phacelia
Phacelia minor	California bells
Plagiobothrys collinus	Cooper's popcorn flower
Lamiaceae	
Marrubium vulgare	horehound
Salvia apiana	white sage
Salvia columbariae	chia
Malvaceae	
Malva parviflora	cheeseweed
Nyctaginaceae	
Mirabilis californica	wishbone bush
Papaveraceae	
Eschscholzia californica	California poppy
Polygonaceae	
Chorizanthe polygonoides var. longispina	long-spined spineflower
Eriogonum elongatum	longstem buckwheat
Eriogonum fasciculatum	California buckwheat
Pterostegia drymarioides	pterostegia

Portulacaceae	
Calandrinia ciliata	redmaids
Plantaginaceae	
Plantago erecta	California plantain
Ranunculaceae	
Delphinium parryi ssp. parryi	San Bernardino delphinium
Rhamnaceae	
Rhamnus ilicifolia	hollyleaf redberry
Rosaceae	
Adenostoma fasciculatum	chamise
Prunus ilicifolia	holly-leafed cherry
Rubiaceae	
Galium angustifolium ssp. *angustifolium*	narrow leaf bedstraw
Scrophulariaceae	
Keckiella antirrhinoides var. *antirrhinoides*	chaparral beard tongue
Solanaceae	
Datura wrightii	datura
Nicotiana glauca	tree tobacco
Tamaricaceae	
Tamarix ramosissima	tamarisk

Appendix C
Photographs



Representative ground squirrel burrow from burrow location B1.



Representative ground squirrel burrow from burrow location B2.



Representative ground squirrel burrow from burrow location B3



Representative ground squirrel burrows from burrow location B4.



Representative ground squirrel burrows from burrow location B8.



Photo of habitat generally associated with ground squirrel burrows B3-B9, aspect north.



Photo of habitat generally associated with ground squirrel burrows B11-B12, aspect west



Representative ground squirrel burrow from burrow location B12.



General photo of man-made location B13, aspect northwest.



General photo of off-site pasture, west of the Project Areas lower western boundary.



Representative ground squirrel burrow from burrow location B14.



Photo of habitat generally associated with ground squirrel burrows located at burrow location B14, aspect southwest.

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12 August 2009

Project No. 6151000801

Ms. Adelina Muñoz
Southern California Edison
Biological and Archeological Resources Group
G.O. 1, Quad 3A, 312B
2244 Walnut Grove Avenue
Rosemead, CA 91770

Subject **Fairy Shrimp Habitat Assessment for the Alberhill Substation Project in Riverside County, California**

Dear Ms. Muñoz:

This letter presents the results of a fairy shrimp habitat assessment conducted by AMEC Earth & Environmental, Inc. (AMEC) as part of the proposed Alberhill Substation Project (Project), located approximately 4 miles north of Lake Elsinore, in Riverside County, California.

Purpose

This fairy shrimp habitat assessment was performed to determine the potential of listed fairy shrimp species presence on site. The project site encompasses the Alberhill Substation Project location (Photograph 1). In the middle of the project site is a race track (study area). The interior of the race track was identified as potentially suitable habitat for fairy shrimp during a biological constraints analysis; therefore is the subject of this detailed habitat assessment. Two federally listed fairy shrimp species have the potential to occur within the study area: vernal pool fairy shrimp (*Branchinecta lynchi*), listed as threatened; and Riverside fairy shrimp (*Streptocephalus wootoni*), listed as endangered. Versatile fairy shrimp (*Branchinecta lindahli*), a common species, may co-occur with either listed species. A brief description of each species is given below:

- Vernal pool fairy shrimp can be found between December and May throughout Central Valley and as an extant population at Santa Rosa Plateau in Riverside County, typically in grasslands with sandstone outcrops. Other habitat types include small swale, earth slump, and basalt-flow detention basin with unplowed grassland. For this species to reach maturity and reproduce, pools must be inundated for 18 to 41 days, with temperatures ranging from 4.5 to 23 degrees Celsius (40.1 to 73 degrees Fahrenheit) (Erikson and Belk 1999).

- Riverside fairy shrimp typically is detected in late spring. This species has one of the most restricted ranges, with a recorded range extending from southern Orange County to western Riverside County and south along the coastal areas in San Diego County to Baja California, Mexico. Seasonal grasslands, sometimes with coastal sage scrub or chaparral components, are typical for Riverside fairy shrimp. For this species to reach maturity and reproduce, pools must be inundated for at least 48 to 56 days. Pools with longer inundation times may be preferable. Water temperatures range from 10 to

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20 degrees Celsius (50 to 68 degrees Fahrenheit); however, Riverside fairy shrimp can exist with temperatures at or greater than 25 degrees Celsius (77 degrees Fahrenheit) (Erikson and Belk 1999).

- Versatile fairy shrimp is most often observed from December to May, but can be active throughout the wet season. It is considered one of the most widespread species, occurring throughout southern California. This species also occurs in most of the states west of the Rocky Mountains and the Great Plains from Canada to Kansas. It also is known from many habitats, such as playas, arid grassland swales, lava flows, and natural depressions, as well as road-side ditches, quarries, bulldozed holes, and tire ruts. Pool inundation for this species to reach maturity and reproduction is between 9 and 20 days, depending on water temperature. Typically in California, versatile fairy shrimp are found in pools that range from 1.5 to 22.2 degrees Celsius (34.7 to 72.0 degrees Fahrenheit) (Erikson and Belk 1999).

Existing Conditions
The Project site is within a rural residential area of Riverside County, approximately four miles north of Lake Elsinore. The study area is located on an active equine facility which boards horses and trains them for racing, as well as supporting other agricultural activities including cattle grazing and raising chickens. More specifically, the study area includes the riparian habitat within the middle of the existing race track (Photograph 1). The nearest blue line stream is Temescal Wash. It is approximately 1,000 feet southwest of the study area (NRCS 2009).

Precipitation level data was recorded at the nearest weather station: Elsinore station, near Lake Elsinore. The last recorded rain event occurred in April, which had 0.05 inch. The precipitation level as of August 2009 is 4.33 inches; winter month data will not be documented until the end of the year. The previous four years had highly variable precipitation levels, with 26.18 inches in 2005 and 0.35 inch in 2007 (DRI 2009).

Survey Methodology
The fairy shrimp habitat assessment was conducted on 23 March 2009 between approximately 9:00 a.m. and 12:00 p.m. (0900 and 1200) by AMEC biologists Nicole Shorey and John Green. Weather conditions during the survey were as follows: 56 to 61 degrees Fahrenheit, zero percent cloud cover, and 3 to 6 mile per hour winds. The survey was performed by slowly walking the study area (the interior of the race track) to determine the potential for vernal pool fairy shrimp and Riverside fairy shrimp to occur on site.

Survey Results
The study area supports a mosaic of fresh water marsh, mule fat scrub, and southern willow scrub habitats surrounded by maintained lawns (Photographs 2 through 4). Both native and nonnative vegetation are present, such as Goodding's black willow (*Salix gooddingii*), mule fat (*Baccharis salicifolia*), cattail (*Typha* sp.), salt cedar (*Tamarix* sp.), and fan palm (*Washingtonia robusta*). Some water (a few inches) was present during the survey. The ponding area could easily hold water up to several feet in depth. This ponding area appears to be man-made, and was probably constructed when the race track was built. There was a pipe in the middle of the pond, which most likely distributes water. It is difficult to say how often water is distributed to the pond and how long it remains inundated with water. However, the presence of fresh water

marsh, mule fat scrub, and southern willow scrub vegetation indicate that water ponds at least six months during the year to support these habitats (USFWS 1998).

The study area does not support suitable habitat for vernal pool fairy shrimp or Riverside fairy shrimp, as vegetation on site is predominantly riparian or maintained lawns. Suitable habitats for vernal pool fairy shrimp are grasslands with sandstone outcrops, as well as small swales, earth slumps, or basalt-flow detention basins with unplowed grassland. Suitable habitat for Riverside fairy shrimp includes grasslands, occasionally with coastal sage scrub or chaparral components. Soils typical of vernal pools have a clay component, sometimes called “lenses”, which allows water to pond.

No vernal pools were identified during the fairy shrimp habitat assessment. Vernal pool indicator plant species, such as native alkali weed (*Cressa truxillensis*), popcorn flower (*Plagiobothrys* sp.), toad rush (*Juncus bufonius*), woolly marbles (*Psilocarphus brevissimus*), and/or nonnative hyssop loosestrife (*Lythrum hyssopifolium*) were not detected during the survey. In addition, soils within the study area are comprised of Honcut sandy loam eroded soils, with slopes between 8 and 15 percent. The soils are well drained and alluvium is derived from igneous rock (NRCS 2009). Therefore, vernal pool fairy shrimp and Riverside fairy shrimp are not expected to occur within the study area because suitable habitat is not present.

Recommendations

There is no potential for vernal pool fairy shrimp or Riverside fairy shrimp to occur within the study area due to lack of suitable habitat, and no further action is required. To ensure impacts to both species will not occur, Southern California Edison will conduct dry season surveys.

However, there is low potential for the state and federally listed as endangered least Bell’s vireo (*Vireo bellii pusillus*) to occur on site, as riparian habitat is present. In addition, the study area is located within close proximity to Alberhill Creek (less than 1,000 feet west of the study area). To ensure this listed subspecies is not impacted as a result of construction activities vegetation should not be removed during the breeding season of March 1 through June 30 (County of Riverside 2003). In addition, noise abatement measures, protocol level surveys, or other mitigation measures may be required.

Please contact me at (858) 300-4338 or Wes Speake at (951) 369-8060 if you have any questions regarding this notification.

Sincerely,
AMEC Earth & Environmental, Inc.



Nicole Shorey
E-mail: nicole.shorey@amec.com
Tel: 858-300-4338

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Photograph 1: Looking West at Study Area (interior of existing race track)



Photograph 2: Looking North at Fresh Water Marsh and Maintained Lawn



Photograph 3: Looking Northwest at Mule Fat Scrub and Southern Willow Scrub



Photograph 4: Looking North at Fresh Water Marsh, Mule Fat Scrub, Southern Willow Scrub, and Maintained Lawn (in the background)

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FOCUSED RARE PLANT SURVEYS
APRIL AND MAY 2009
PROPOSED ALBERHILL SUBSTATION SITE
LAKE ELSINORE, CA

PREPARED FOR:



ADELINA MUÑOZ
SOUTHERN CALIFORNIA EDISON
BIOLOGIST
NATURAL AND CULTURAL RESOURCES GROUP
2244 WALNUT GROVE AVE.
ROSEMEAD, CA 91770

Certification: I hereby certify that the statements furnished herein and in the attached exhibits present data and information required for this Biological Survey to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

MATTHEW MALLÉ
MATTHEW.MALLE@AECOM.COM

DATE:
MAY 28, 2009

Introduction

AECOM Biologist Matthew Mallé performed a rare plant survey in support of the proposed Alberhill Substation construction, Lake Elsinore, California.

The purpose of the rare plant survey was to determine presence/absence of rare plant species identified as having the potential to occur within or adjacent to the Project Area. In November 2008, a Biological Constraints Analysis was prepared in support of this project, and the project site was determined to potentially provide suitable habitat for a number of federal, state, Riverside County, and California Native Plant Society (CNPS) listed plant species (rare plants). As a result, the Biological Constraints Analysis recommended multiple rare plant surveys during the blooming periods (Spring 2009) of these species.

Study Site Location

The Alberhill substation site (Project Area) is approximately 125 acres and is located within the Temescal Valley, south of Corona, California. The Project Area can be found on the Alberhill, CA 7.5 minute United States Geological Survey (USGS) topographic quadrangle (1980). The Project Area is located within the northwest ¼ of Section 16, Township 5 South, Range 5 West, in an unincorporated portion of Lake Elsinore, CA. The approximate elevation range of the Project Area is 1,200 to 1,620 feet. The Project Area is located at 14116 Temescal Canyon Road, north of the road. The Temescal Wash is located west of the Project Area boundary. The foothills of the Peninsular Range, Gavilan Hills region, make up the Project Area's northern portion, and are present northeast, north and west of the Project Area. The Project Area's southern boundary is defined by both Temescal Canyon Road and Concordia Ranch Road (see Figure 1).

Portions of the Project Area were being used as a horse ranch at the time of the rare plant surveys. A majority of the Project Area's southern portion was developed and contained facilities associated with the horse ranch activities (corrals, stables, housing, etc.). The northern portion of the Project Area contains steep hillsides vegetated with a mosaic of non-native annual grasslands and pockets of coastal sage scrub and chaparral communities

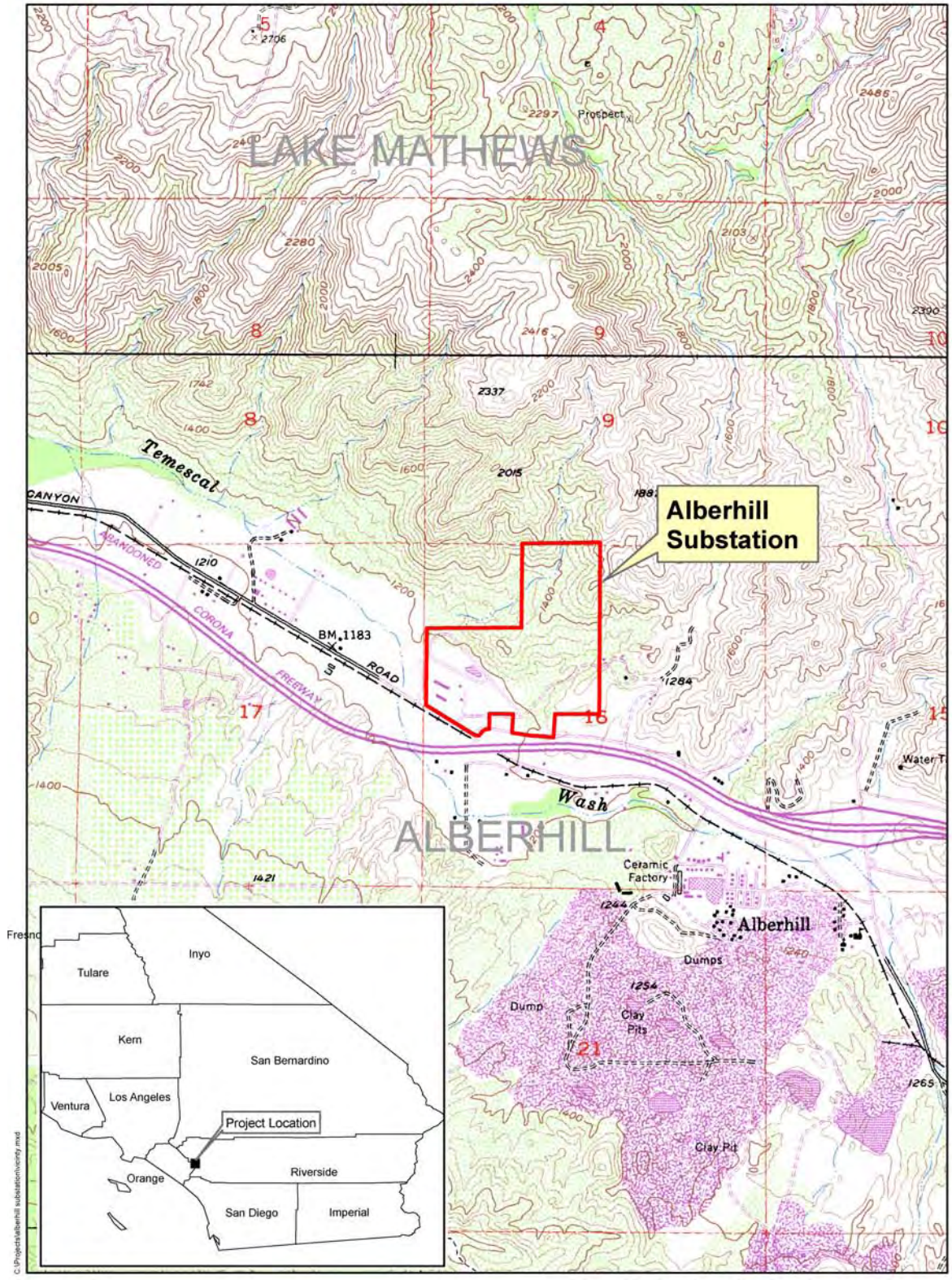
Methodology

The following guidelines were used to help design the rare plant surveys described within this report: *U.S. Fish and Wildlife Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species*, dated January 2000 and *California Department of Fish and Game Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*, dated May 8, 2000.

Literature and Database Research

A) Prior to beginning the fieldwork, a review of existing information contained in the California Natural Diversity Database (CNDDB) (2009) and the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (2009) were reviewed to identify listed plant species with the potential to occur within the Project Area. In addition, a Riverside County Integrated Plan (RCIP) Conservation Summary Report was generated for the eight Assessor Parcel Numbers (391-120-002, 391-120-015, 391-120-016, 391-120-022, 391-120-024, 391-120-026, 391-160-021, and 391-160-022) that make up the Project Area to determine if they occurred within survey areas and/or conserved lands (criteria cells) for the Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP). In addition to the aforementioned data sources, the following is a complete list of resources reviewed as part of the literature and database research portion of this plant survey:

   - CNDDB (CDFG, 2009)
   - CNPS Electrical Inventory Records (CNPS, 2009)
   - Data gathered from WRCMSHCP (Riverside County, 2003)



Project Location
Alberhill Substation Site
Riverside County, CA

Figure 1

- Personal Conversation with Mr. Andrew Sanders, Curator/Museum Scientist of the University of California, Riverside Herbarium
- Data provided by the participants of the Consortium of California Herbaria (Regents of the University of California, 2008)

This search revealed that the entire Project Area falls within the fee area for the WRCMSHCP and that a number of species, including federal, state, CNPS, and county (Narrow endemic and Criteria Area species) listed had the potential to occur on or adjacent to the Project Area. The species included in Table 1 are the list taxa for which surveys were conducted during April and May 2009.

Rare Plant Survey.

B) Prior to initiating the rare plant surveys, the biologist conducting the surveys visited the University of California, Riverside, Herbarium to study and become familiar with available specimen identified as having the potential to occur on or adjacent to the Project Area.

The rare plant surveys were conducted by Matthew Malle, a biologist for AECOM, during the appropriate time year to allow for the detection and identification during optimal blooming/fruiting period for each of the special status species identified as having the potential to occur on the Project Area. The biologist conducted the first rare plant survey on April 15-17 and 20-21, 2009. The second rare plant survey was conducted on May 12-15. One day of field work averaged eight hours of survey time for the biologist.

The developed portions (~33 acres) of the Project Area were excluded from the acreage surveyed during this effort due to lack of suitable habitat. The remaining approximate 92 acres (survey area) of undeveloped grassland and sage scrub habitat were surveyed on foot. In order to ensure thorough coverage of the survey area, pedestrian transects were systematic and spaced appropriately to compensate for varying vegetation heights/densities and topographical issues encountered during this effort. An effort was made to survey 100 percent of the survey area; however, areas inaccessible due to steep topography were surveyed by scanning the ground surface with binoculars.

The biologist conducting the survey carried the following equipment:

- Aerial maps of the survey area,
- GPS unit,
- Field notebook for documenting species encountered and plant habitat characteristics,
- Camera (digital camera) to further document findings by photographing habitat conditions and flora of interest, and
- Plant press to collect voucher specimens of unknown species.
- California Department of Fish and Game authorization to collect voucher specimens of state-listed endangered, threatened, or rare plants, Permit No. 2081(a)-09-33-V

Data recorded for survey results, included:

- Date, time and weather conditions of each survey,
- GPS waypoints to record any observed rare plants or areas of ecological interests,
- Habitat conditions,
- All vascular plants observed onsite (native or naturalized), and
- Any special status species observed and associated species.

Table 1. Sensitive Plant Species

Scientific Name (common Name) Family	Status (CNPS/ State/Federal)	Elev (Meters)	Bloom Period	Life Form	Habitat	Notes
Abronia villosa var. aurita (Chaparral sand verbena) Nyctaginaceae	1B.1/-/-	80-1600	Jan-Sep	annual herb	Chprl, CoScr, DeDns	Sandy
Allium munzii ‡ (Munz's onion) Liliaceae	1B.1/T/E	297-1070	March-May	perennial bulbferous herb	Chprl, Cmwld, CoScr, PJWld, VFGrs/mesic, clay	Found in mesic exposures and restricted to clay soils. May not flower in dry years and may be difficult to locate during surveys conducted in such a year
Ambrosia pumila ‡ (San Diego ambrosia) Asteraceae	1B.1/-/E	20-415	April-Oct	perennial rhizomatous herb	Chprl, CoScr, VFGrs, VnPls/often in	In western Riv. Co. found in open floodplain terraces or in the watershed margins of vernal pools.
Arctostaphylos rainbowensis (rainbow manzanita) Ericaceae	1B.1/-/-	225-670	Dec-March	perennial evergreen shrub	Chprl	-
Atriplex coronata var. notatior (San Jacinto Valley crownscale) Chenopodiaceae	1B.1/-/E	135-500	April-Aug	annual herb	Plyas, VFGrs/mesic, Vnpls/alkaline	Restricted to highly alkaline, silty clay soils in association with Traver-Domino-Willows soil association; the majority of populations associated with the Willow series.
Atriplex coulteri (Coulter's saltbush) Chenopodiaceae	1B.2/-/-	3-460	March-Oct	perennial herb	CBScr, CoDns, CoScr, VFGrs	-
Atriplex parishii † (Parish's brittlescale) Chenopodiaceae	1B.1/-/-	25-190	June-Oct	annual herb	ChScr, Plyas, VnPls	Domino, Willows, or Traver Soil Series
Atriplex serenana var. davidsonii † (Davidson's saltscale) Chenopodiaceae	1B.2/-/-	10-200	April-Oct	annual herb	CBScr, CoSCR	Founds in alkaline soils--Domino, Willows, and Traver Series. Reliant of periodic inundation
Brodiaea filifolia † (thread-leaved brodiaea) Liliaceae	1B.1/E/T	25-1219	March-June	perennial bulbiferous herb	Chprl openings, CmWld, CoScr, Plyas, VFGrs, VnPls	Occurs in clay or alkaline silty-clay soils
Brodiaea orcuttii (Orcutt's brodiaea) Liliaceae	1B.1/-/-	30-1692	May-July	perennial bulbiferous herb	CCFrs, Chprl, CmWld, Medws, VFGrs, VnPls	Occurs in mesic sites on clay and sometimes serpentine soils

Scientific Name (common Name) Family	Status (CNPS/ State/Federal)	Elev (Meters)	Bloom Period	Life Form	Habitat	Notes
Brodiaea santarosae (Santa Rosa Basalt brodiaea) Liliaceae	3/-/-	580-1045	May-June	perennial bulbiferous herb	VFGrs	Occurs in basaltic soils
California macrophylla † (round-leaved filaree) Geraniaceae	1B.1/-/-	15-1200	Mar-May	annual herb	CmWld, VFGrs	Clay Soils
Callitropsis forbesii (Tecate cypress) Cupressaceae	1B.1/-/-	255-1500	-	perennial evergreen tree	CCFrs, Chprl	Occurs in clay, gabbroic or metavolcanic soils
Calochortus plummerae (Plummer's Mariposa lily) Liliaceae	1B.2/-/-	100-1700	May-July	perennial bulbiferous herb	Chprl, CmWld, CoScr, LCFrs, VFGrs	Occurs in rocky granitic soils.
Calochortus weedii var. intermedius (intermediate Mariposa lily) Liliaceae	1B.2/-/-	105-855	May-Jul	perennial bulbiferous herb	Chprl, CoScr, VFGrs	Occurs in rocky, calcareous soils
Caulanthus simulans (Payson's jewel flower) Brassicaceae	4.2/-/-	90-2200	Mar-May	annual herb	Chprl, CoScr	Sandy or granitic sites
Centromadia parryi ssp. australis (southern tarplant) Asteraceae	1B.1/-/-	0-427	May-Nov	annual herb	MshSw margins, VFGrs vernally mesic, VnPls	-
Centromadia pungens ssp. laevis † (smooth tarplant) Asteraceae	1B.1/-/-	0-480	Apr-Sep	annual herb	ChScr, Medws, Plyas, RpWld, VFGrs	Alkaline soils
Chorizanthe parryi var. parryi (Parry's spineflower) Polygonaceae	1B.1/-/-	275-1220	April-June	annual herb	Chprl, CmWld, CoScr, VFGrs	Sandy or rocky openings
Chorizanthe polygonoides var. longispina ‡ (long-spined spineflower) Polygonaceae	1B.2/-/-	30-1530	April-July	annual herb	Chprl, CoScr, Medws, VFGrs, VnPls	Often in clay soils

Scientific Name (common Name) Family	Status (CNPS/ State/Federal)	Elev (Meters)	Bloom Period	Life Form	Habitat	Notes
Chorizanthe xanti var. leucotheca (white-bracted spineflower) Polygonaceae	1B.2/-/-	300-1200	April-June	annual herb	MDScr, PJWld,	Sandy or gravelly sites
Comarostaphylis diversifolia ssp. diversifolia (summer holly) Ericaceae	1B.2/-/-	30-550	April-June	perennial evergreen shrub	Chprl, CmWld	-
Dodecahema leptoceras (slender-horned spineflower) Polygonaceae	1B.1/E/E	200-760	April-June	annual herb	Chprl, CmWld, CoScr alluvial fan	Sandy sites, frequently with crytogamic crusts. Occurs within mature alluvial scrub that is maintained with periodic flooding
Dudleya cymosa ssp. ovatifolia (Santa Monica dudleya) Crassulaceae	1B.2/-/T	150-1675	Mar-June	perennial herb	Chprl, CoScr	Sedimentary or volcanic soils, rocky substrate
Dudleya multicaulis ‡ (many-stemmed dudleya) Crassulaceae	1B.2/-/-	15-790	April-July	perennial herb	Chprl, CoScr, VFGrs	Often found in clay soils associated with barrens, rocky places, and ridgelines. Also found in openings of Chprl, and CoScr.
Dudleya viscida (sticky dudleya) Crassulaceae	1B.2/-/-	10-550	May-June	perennial herb	CBScr, Chprl, CmWld, CoScr	Rocky substrate
Eryngium aristulatum var. parishii (San Diego button-celery) Apiaceae	1B.1/E/E	20-620	April-June	annual/perennial herb	CoScr, VFGrs, VnPls	Mesic Sites
Geothallus tuberosus (Campbell's liverwort) Sphaerocarpaceae	1B.1/-/-	10-600	-	ephemoral liverwort	CoScr mesic, VnPls	-
Harpagonella palmeri (Palmer's grapplinghook) Boraginaceae	4.2/-/-	20-995	Mar-May	annual herb	Chprl, CoScr, VFGrs	Clay Soils
Hemizonia (=*Deinandra*) paniculata (Paniculate tarweed) Asteraceae	4.2/-/-	25-940	April-Nov	annual herb	CoScr, VFGrs, VnPls	Openings in chaparral and woodlands, disturbed sites, often sandy soils

Scientific Name (common Name) Family	Status (CNPS/ State/Federal)	Elev (Meters)	Bloom Period	Life Form	Habitat	Notes
Horkelia cuneata ssp. puberula (mesa horkelia) Rosaceae	1B.1/-/-	70-810	Feb-Jul	perennial herb	Chprl maritime, CmWld, Coscr	Sandy or gravelly sites
Imperata brevifolia (California satintail) Poaceae	2.1/-/-	0-500	Sep-May	perennial rhizomatous herb	Chprl, CoScr, MDScr, Medws often alkali, RpScr	Mesic sites
Lasthenia glabrata ssp. coulteri † (Coulter's goldfields) Asteraceae	1B.1/-/-	1-1220	Feb-June	annual herb	MshSw coastal salt, Plyas, VnPls	Traver, Willows, and Domino Series. Reliant on periodic inundation
Lepechinia cardiophylla (heart-leaved pitcher sage) Lamiaceae	1B.2/-/-	520-1370	April-June	perennial shrub	CCFrs, Chprl, CmWld	Decomposed granite soils
Lepidium virginicum var. robinsonii (Robinson's pepper-grass) Brassicaceae	1B.2/-/-	1-885	Jan-July	annual herb	Chprl-CoScr	-
Lilium parryi (lemon lily) Liliaceae	1B.2/-/-	1220-2745	Jul-Aug	perennial bulbiferous herb	LCFrs, Medws, RpFrs, UCFrs	Mesic sites
Limnanthes gracilis ssp. parishii (Parish's meadowfoam) Limnanthaceae	1B.2/E/-	600-2000	April-June	annual herb	LCFrs, Medws, VnPls	Vernally mesic sites
Monardella hypoleuca ssp. lanata (felt-leaved monardella) Lamiaceae	1B.2/-/-	300-1575	June-Aug	perennial rhizomatous herb	Chprl, CmWld	-
Monardella macrantha ssp. hallii (Hall's monardella) Lamiaceae	1B.3/-/-	730-2195	June Oct	perennial rhizomatous herb	BUFrs, Chprl, CmWld, LCFrs, VFGrs	-
Myosurus minimus ssp. apus † (little mousetail) Ranunculaceae	3.1/-/-	20-640	Mar-June	annual herb	VFGrs, Vnpls	Alkaline soils and depends on specific hydrology associated with vernal pools

Scientific Name (common Name) Family	Status (CNPS/ State/Federal)	Elev (Meters)	Bloom Period	Life Form	Habitat	Notes
Navarretia fossalis ‡ (spreading navarretia) Polemoniaceae	1B.1/-/T	30-1300	Aprl-June	annual herb	ChScr, MshSw assorted shallow freshwater, Plyas, VnPls	Vernal pools, depressions and ditches, saline and alkaline soils
Navarretia prostrate (prostrate vernal pool navarretia) Polemoniaceae	1B.1/-/-	15-700	April-July	annual herb	CoScr, Medws, VFGrs alkaline, VnPls	Mesic sites often associated with alkaline soils.
Nolina cismontana (Peninsular nolina) Liliaceae	1B.2/-/-	140-1275	May-July	perennial evergreen shrub	Chprl, CoScr	Sandstone or gabbro association
Orcuttia californica ‡ (California Orcutt grass) Poaceae	1B.1/E/E	15-660	April-Aug	annual herb	VnPls	Alkaline soils and southern bsaltic claypan
Pentachaeta aurea ssp. allenii (Allen's daisy) Asteraceae	1B.1/-/-	75-520	Mar-June	annual herb	CoScr openings, VFGrs	-
Phacelia suaveolens ssp. keckii (Santiago Peak phacelia) Hydrophyllaceae	1B.3/-/-	545-1600	May-June	annual herb	CCFrs, Chprl	-
Pseudognaphalium leucocephalum (white rabbit-tobacco) Asteraceae	2.2/-/-	0-2100	Aug-Nov	perennial herb	Chprl, CmWld, CoScr, RpWld,	Sandy and gravelly sites
Quercus dumosa (Nuttall's scrub oak) Fagaceae	1B.1/-/-	15-400	Feb-Apr	perennial evergreen shrub	CCFrs, Chprl, CoScr	Sandy, clay loam
Satureja chandleri ‡ (San Miguel savory) Lamiaceae	1B.2/-/-	120-1075	Mar-July	perennial shrub	Chprl, CmWld, CoScr, RpWld, VFGrs	Occurs in rocky, gabbroic or metavolcanic soils
Scutellaria bolanderi ssp. austromontana (southern mountains skullcap) Lamiaceae	1B.2/-/-	425-2000	June-Aug	perennial rhizomatous herb	Chprl, CmWld, LCFrs	Mesic sites

Scientific Name (common Name) Family	Status (CNPS/ State/Federal)	Elev (Meters)	Bloom Period	Life Form	Habitat	Notes
Sibaropsis hammittii ‡ (Hammitt's clay-cress) Brassicaceae	1B.2/-/-	720-1065	Mar-Apr	annual herb	Chprl openings, VFGrs	clay sites
Sidalcea neomexicana (salt spring checkerbloom) Malvaceae	2.2/-/-	15-1530	Mar-Jun	perennial herb	Chprl, CoScr, LCFrs, MDScr, Plyas	Mesic sites in alkaline soils
Sphaerocarpos drewei (bottle liverwort) Sphaerocarpaceae	1B.1/-/-	90-600	-	ephemoral liverwort	CmWld, CoScr, LCFrs	
Symphyotrichum defoliatum (San Bernardino aster) Asteraceae	1B.2/-/-	2-2040	July-Nov	perennial rhizomatous herb	Medws, MshSw, VFGrs vernally mesic	Often associated with ditches streams, or springs
Trichocoronis wrightii var. wrightii ‡ (Wright's trichocoronis) Asteraceae	2.1/-/-	5-435	May-Sep	annual herb	Medws, MshSw, RpFrs, VnPls	Alkaline soils

Notes:
List of sensitive plant species to survey for was compiled from information CNDDB Rarefind (2009), California Native Plant Society's *Inventory of Rare and Endangered Plant of California* (2009) and the Western Riverside County Multiple Species Habitat Conservation Plan. Species marked with a cross (†) have been identified as WRCMSHCP Criteria Area Species and those marked with double crosses (‡) have been identified as WRCMSHCP Narrow Endemic Plant Species.

BuFrs = Broadleaf upland forest
CCFrs = Closed-cone coniferous forest
Chprl = chaparral
ChScr = Chenopod scrub
CoScr = Coastal sage scrub
CmWld = Cismontane woodland
CoDns = Coastal dunes
DeDns = Desert dunes
LCFrs = Lower montane coniferous forest
MDScr = Mojave Desert scrub
Medws = Meadows
MshSW = Marshes/Swamps
PJWld = Pinyon-Juniper woodland
Plyas = Playas
RpScr = Riparian scrub
UCFrs = Upland montane coniferous forest
VFGrs = Valley/Foothill grassland
VnPls = Vernal pools

Status: E = endangered, T = threatened

CNPS Listing:

1A. Presumed extinct in California
1B. Rare or Endangered in California and elsewhere
2. Rare or Endangered in California, more common elsewhere
3. Plants for which we need more information - Review list
4. Plants of limited distribution - Watch list

CNPS Threat Code:

.1 - Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

Results

Soil Types

A soil survey was not conducted as part of the rare plant survey; however, the soil types were mapped within the region of Project Area (see Figure 2).

Botanical Resources

Botanical resources include vegetative communities and the species that comprise and inhabit those communities. This section discusses the dominant habitat types observed on site during the rare plant surveys and provides a list of survey area flora encountered.

Habitat Types

The dominant habitat types occupying the survey area are annual (non-native) grassland and coastal sage scrub.

Annual (Nonnative) Grassland

Nonnative grasslands primarily are composed of annual grass species introduced from the Mediterranean basin and other Mediterranean climate regions with variable presence of non-native and native herbaceous species (Riverside County, 2003). Species composition of non-native grasslands may vary over time and location, based on grazing or fire regimes, soil disturbance, and annual precipitation patterns (Riverside County, 2003). Nonnative grasslands typically produce deep layers of organic matter, which is inversely related to the abundance of non-native and native forbs (Riverside County, 2003). As is suspected with the Project Area, most nonnative grasslands have likely developed as a result of past agricultural or urban development related activities, including discing, brushing, grading, or overgrazing of native habitats (Riverside County, 2003). Research has shown that nonnative grasslands currently are increasing in distribution in areas formerly supporting coastal sage scrub (Riverside County, 2003).

The nonnative grasslands observed within the survey were variable with respect to composition and densities. However, the dominant nonnative grassland species observed during the rare plant surveys were fairly consistent from one expression to the next and included common wild oats (*Avena fatua*), slender wild oats (*Avena barbata*), ripgut (*Bromus diandrus*), cheatgrass (*Bromus tectorum*), soft chess (Bromus hordeaceus), red brome (*Bromus madritensis* ssp. *rubens*), and barley (*Hordeum murinum*). Other nonnative grasses observed during the surveys included cultivated oats (*Avena sativa*), false brome (*Brachypodium distachyon*), rat-tail fescue (*Vulpia (= Festuca) myuros*), and golden top (*Lamarkia aurea*). Several nonnative (often invasive) annual herbs were dominant as well, including short-pod mustard (*Hirschfeldia incana*), filaree (*Erodium* sp.), and tocalote (*Centaurea melitensis*). Other non-native forbs observed included *Helianthus* sp., cheeseweed (*Malva parviflora)*, horehound (*Marrubium vulgare*), Russian thistle (*Salsola tragus*), and London rocket (*Sisymbrium irio*). Castor bean (*Ricinus communis*), tree tobacco, (*Nicotiana glauca*), and tamarisk (*Tamarix ramosissima*) were observed along the fringes of the grassland community, usually adjacent to roadways or the developed portions of the Project Area. In addition to the dominant invasive exotics, several native species were observed competing within the nonnative grassland community, the species included giant rye grass (*Leymus condensatus*), purple needlegrass (*Nassella* (= *Stipa*) *pulchra)*, one-sided bluegrass (*Poa secunda*), pacific fescue (*Vulpia microstachys* var. *pauciflora*), common goldenstar (*Bloomeria crocea*), blue dicks (*Dichelostemma capitatum* ssp. *capitatum*), tarragon (*Artemisia dracunculus*), wild carrot (*Daucus pusillus*), slender sunflower (*Helianthus gracilentus*), slender tarweed (*Hemizonia fasciculata*), Kellogg's tarweed (*Hemizonia kelloggii*), narrow-leaf bedstraw (*Galium angustifolium* ssp. *angustifolium*) doveweed (*Eremocarpus setigerus*), fiddleneck (*Amsinckia* sp.), caterpillar phacelia (*Phacelia cicutaria* var *hispida*), distant phacelia (*Phacelia distans*), California bells (*Phacelia minor*), and California poppy (*Eschscholzia californica*).



Z:\SCE\albenhill substation\soil.mxd

Legend

- Site Boundary
- Soil Boundary

Soil Type Symbol	Soil Type
GhC	Gorgonio loamy sand, 0 to 8 percent slopes
HnC	Honcut sandy loam, 2 to 8 percent slopes
HnD2	Honcut sandy loam, 8 to 15 percent slopes, eroded
HoE	Honcut cobbly sandy loam, 2 to 25 percent slopes
HuC2	Honcut loam, 2 to 8 percent slopes, eroded
TbF2	Temescal rocky loam, 15 to 50 percent slopes, eroded
TvC	Tujunga loamy sand, channeled, 0 to 8 percent slopes
YbD2	Yokohl loam, 8 to 15 percent slopes, eroded
YbE3	Yokohl loam, 8 to 25 percent slopes, severely eroded

Source
U.S. Department of Agriculture,
Natural Resources Conservation Service
Publication Date: 01/03/2008

N

0 87.5 175 350 Feet

Figure 2

Aerial
with Soil Data Layer Overlay

Coastal Sage Scrub

Coastal sage scrub forms various stands dominated by a characteristic suite of low-stature, aromatic, drought-resistant deciduous shrubs and subshrub species (Riverside County, 2003). Compositions vary substantially depending on physical circumstances and successional status of the habitat (Riverside County, 2003).

Coastal sage scrub typically is found on xeric sites, in most cases steep, south facing slopes with thin and or rocky soils (Riverside County, 2003). Sage scrub is often distributed in patches throughout its range (Riverside County, 2003). As expressed within the survey area, coastal sage scrub can be found in diverse habitat mosaics with other plant communities, particularly grassland and chaparral (Riverside County, 2003). Coastal sage scrub may convert to chaparral or grassland, depending on slope, aspect, climate, fire history, and other physical factors; conversely, chaparral or grassland areas may convert to coastal sage scrub (Riverside County, 2003).

There are three recognized sub-associations of coastal sage scrub in western Riverside County: Diegan, Riversidean, and coastal scrub (Riverside County, 2003). A majority of coastal sage scrub in Riverside County is contained in the Riversidean sub-association (Riverside County, 2003). However, a recent classification of sage scrub in western Riverside County has identified up to seven sub-associations based upon dominant shrub cover (Riverside County, 2003). These sub-associations include California sagebrush, California buckwheat, California sagebrush-California buckwheat, California sagebrush-white sage, brittlebush, black sage, and California broom (Riverside County, 2003). Three dominant scrub species, California buckwheat (*Eriogonum fasciculatum*), brittle bush (*Encelia farinosa*), and California broom (*Lotus scoparius*), were consistently observed from one expression of sage scrub to the next; however, differences in species composition and densities of dominant species were noted throughout the survey area.

Important shrub canopy associates of the coastal sage scrub observed on site include California buckwheat, brittlebush, and California broom. Other shrub canopy vegetation observed included California aster (*Lessingia filaginifolia*), Palmer's goldenbush (*Ericameria palmeri*), Menzie's goldenbush (*Isocoma menziesii*), California sagebrush (*Artemisia californica*), wishbone bush (*Mirabilis californica*), and white sage (*Salvia apiana*). Both prickly pear and cholla (*Opuntia* sp.) were observed sporadically throughout the survey area; however the highest concentrations were noted within the southeastern region.

Although variable, understory native annual and perennial herb and grass species observed within the sage scrub gaps and openings included red-skinned onion (*Allium haematochiton*), lilac Mariposa lily (*Calochortus splendens*), white pincushion (*Chaenactis artemisiifolia*), slender tarweed, California goldfields (*Lasthenia gracilis*), tidy tips (*Layia platyglossa*), three spot (*Osmadenia tenella*), common cryptantha (*Cryptantha intermedia*), slender petocarya (*Pectocarya linearis* ssp. *ferocula*), shaggy fruit pepperweed (*Lepidium lasiocarpum*), common peppergrass (*Lepidium nitidum*), morning glory (*Calystegia macrostegia*), rattlesnake weed, (*Chamaesyce albomarginata*), pygmy weed (*Crassula connata*), California gnaphalium (*Gnaphalium californicum*), bishop lotus (*Lotus strigosus*), Lupine (*Lupinus bicolor*), Cooper's popcornflower (*Plagiobothrys collinus*), pterostegia (*Pterostegia drymarioides*), chia (*Salvia columbariae*), long-stem buckwheat (*Eriogonum elongatum*), redmaids (*Calandrinia ciliata*), California plantain (*Plantago erecta*), and Jimson weed (*Datura wrightii*). Non-natives annuals consistently associated with the sage scrub canopy gaps and openings included tocalote and red brome.

There were several dry drainages within the sage scrub series. The drainages were noted to contain similar species found throughout the sage scrub series; however, the following species were noted to be associated with the bank and channel regions: desert brickel (*Brickellia desertorum*), yellow yarrow (*Eriophyllum confertiflorum*), and San Bernardino delphinium (*Delphinium parryi* ssp. *parryi*).

Emergent, predominately evergreen shrubs typically associated with chaparral, such as chamise (*Adenostoma fasciculatum*), hollyleaf cherry (*Prunus ilicifolia*), hollyleaf redberry (*Rhamnus ilicifolia*), chaparral beard tongue (*Keckiella antirrhinoides* var. *antirrhinoides*) Mexican elderberry (*Sambucus mexicana*), and laurel sumac (*Malosma laurina*), were observed scattered within the sage scrub series on

site. Two species associated with the understory of the aforementioned chaparral vegetation were bowlesia (*Bowlesia incana*) and wild cucumber (*Marah macrocarpus*).

A complete list of vascular plants observed within the survey area of the Alberhill substation site can be found in Appendix A. Photos of Project Area and select photos of key species can be found in Appendix B.

Sensitive Plant Species

Nineteen of the 55 special status plant species listed within Table 1were determined to have a moderate to high potential occurrence within or adjacent to the Project Area; these include Munz's onion, Coulter's saltbush, three-leaved brodiaea, round-leaved filaree, Plummer's mariposa lily, intermediate Mariposa lily, Payson's jewel flower, Parry's spineflower, long-spined spineflower, many-stemmed dudleya, sticky dudleya, Palmer's grappling hook, paniculate tarweed, mesa horkelia, California satintail, Robinson's pepper-grass, Allen's daisy, Hammit's clay cress and San Bernardino aster. The likelihood of occurrence is based upon available habitat within the survey area and each species' known habitat preferences and/or whether a species was observed within the region requiring similar habitat. The remaining thirty six species within Table 1 either had a low to no potential for occurrence within the survey area due to the lack of appropriate habitat.

Rare Plant Species Observed On Site

The biologist conducting the survey recorded waypoints for all populations of rare plant species encountered during the rare plant surveys. Figure 3 maps the locations of all rare plant species locations within the Project Area.

Paniculate tarweed (*Hemizonia* (=*Deinandra*) *paniculata*)

Paniculate tarweed was observed within what was being used as a livestock (cattle) pen located in the southeast corner of the Project Area on May 12, 2009 (N33 44.168, W117 24.550; N33 44.161, W117 24.539; and N33 44.148, W117 24.552) (see Figure 4 for the location of paniculate tarweed within the Project Area). All three populations of this species were encountered on a generally gentle west facing slope. Each population was noted to contain anywhere from 50-150 individual plants and each had a footprint of approximately 250 to 1500 square feet. Associated species observed within the general area of each population were fairly consistent and included red brome, rat-tail fescue, Kellogg's tarweed, common sandaster, common peppergrass, Cooper's popcorn flower, California plantain and filaree.

Paniculate tarweed is a small annual, 10-80 cm. It is generally bristly below and glandular above. The basal leaves are linear to oblanceolate (1–10 cm,), deeply toothed or lobed; upper leaves are linear, entire. Inflorescence heads are solitary, long-peduncled; involucres are generally 5-7 mm; and phyllaries are densely glandular. There are usually 8-13ray flowers; each ligule 3.5-6 mm, and the color a deep yellow. There are usually 8-13 disk flowers, fertile or staminate; with yellow corollas and black anthers. The fruits of this species are usually 2.5-3 mm long and are beaked. This species is generally associated with dry foothills and mesas, within the South Coast and Southwest Peninsular Ranges (Hickman, J.C. Ed. 1993).

Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)

Long-spined spineflower was observed within and on the fringes of a graded single lane dirt road within the coastal sage scrub and nonnative annual grassland habitat located within the northeastern portion of the Project Area on May 13, 2009. Nine distinct populations of this species were observed (N33 44.317 W117 24.603; N33 44.317 W117 24.605; N33 44.318 W117 24.608; N33 44.318 W117 24.610; N33 44.318 W117 24.613; N33 44.317 W117 24.624; N33 44.318 W117 24.601; N33 44.317 W117 24.594; and N33 44.328 W117 24.600) (see Figure 5 for the location of long-spined spineflower locations within the Project Area). All nine populations of this species were observed clustered along a dirt road carved into a generally steep south facing slope. Each population was noted to contain anywhere from



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Explanation

- *Chorizanthe polygonoides* var. *longispina* (CNPS 1B.2)
- *Hemizonia paniculata* (CNPS 4.2)

200 100 0 200 Feet

Hemizonia paniculata
and
Chorizanthe polygonoides* var. *longispina
Alberhill Substation Site
Riverside County, CA

Figure 3



Explanation

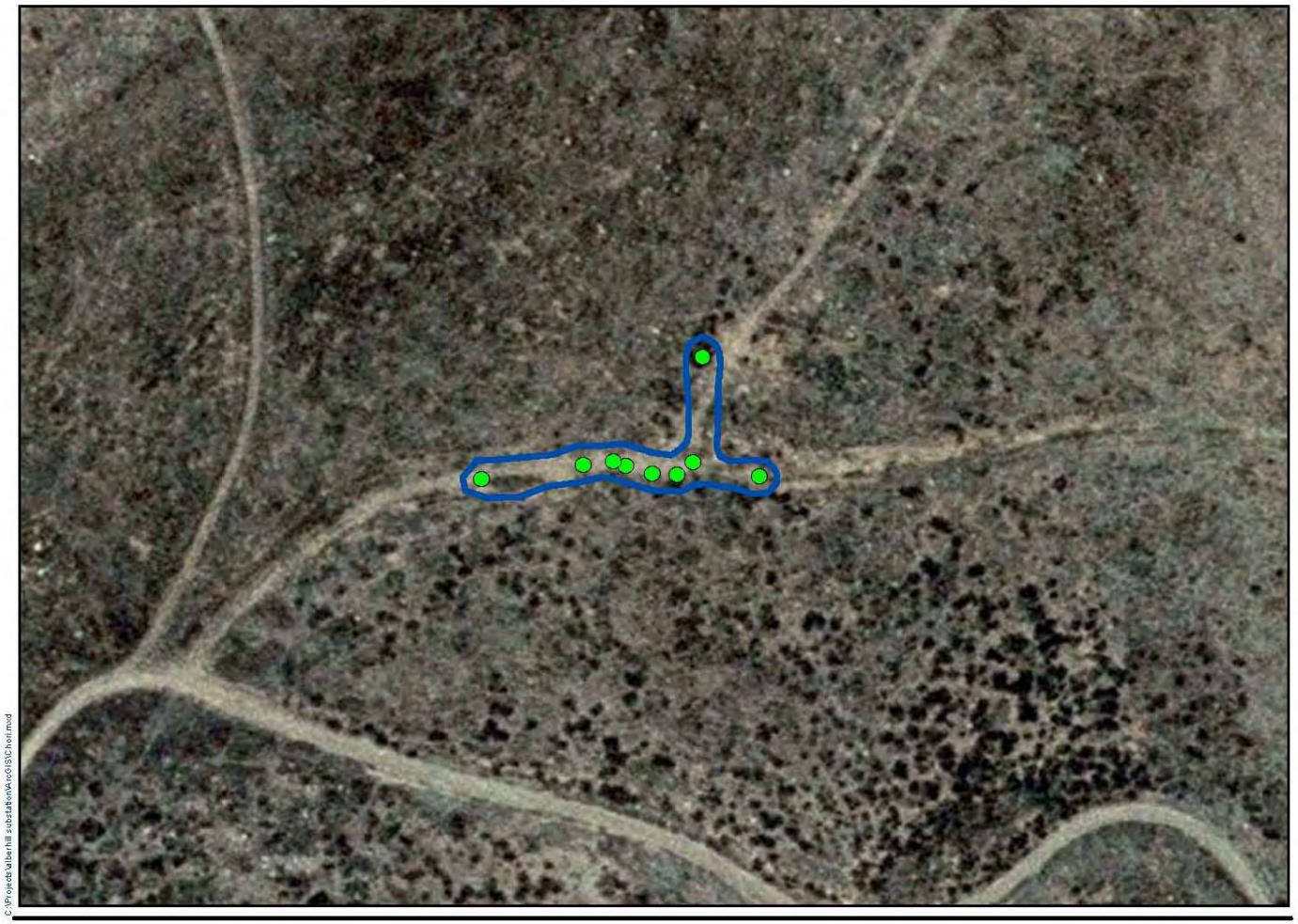
Hemizonia paniculata

Approximate Area of Plant Population

30 15 0 30 Feet

Hemizonia paniculata
Alberhill Substation Site
Riverside County, CA

Figure 4



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Explanation

Chorizanthe polygonoides longispina

Approximate Area of Plant Population

30 15 0 30 Feet

Chorizanthe polygonoides longispina
Alberhill Substation Site
Riverside County, CA

Figure 5

25-50 individual plants and each had a footprint of approximately 3-6 feet in diameter. Because this species was observed within a graded dirt road, it was generally barren; however, the following associated species were observed growing within the roadway: red brome, Kellogg's and fasciculate tarweed, common peppergrass and filaree.

Long-spined spineflower is generally a small, inconspicuous annual herb. The stem is prostrate, 1-15 cm, generally greenish or reddish in color and soft to hairy. The leaf blade is usually 3-10 mm and thinly hairy. The inflorescence is bell-shaped, 3-angled, often reddish, thinly hairy, with prominent bracts. This particular variety's involucre (including awns) length is generally 3-4 mm, the tube is 1.5-2 mm, and its bracts sometimes only 3, usually at a length of 2-3 mm including awns. This species is generally associated with chaparral habitat within the Peninsular Ranges (Hickman, J.C. Ed. 1993).

Discussion

Only 2 of the 19 species with potential to occur within the Project Area were observed during the 2 rare plant surveys conducted during Spring 2009. Many of the rare plant species require specific environmental conditions and habitat constituent elements. The following is a discussion of adverse conditions that may have prevented the surveying biologist from determining presence or identifying some of the expected rare plant species with potential to occur within the Project Area.

According to Riverside County Flood Control rainfall data collected for the years 2008-2009 in the Lake Elsinore area, the average annual rainfall in inches for the geographic area is approximately 11.70 inches (Riverside County Flood Control, 2009). The annual total of rainfall for the 2008-2009 rain season within the Elsinore area was approximately 8 inches (Riverside County Flood Control, 2009). A bulk of this year's rainfall for the Elsinore area occurred late 2008, with approximately 5.33 inches recorded before the end of December (Riverside County Flood Control, 2009). An additional 2.66 inches were recorded between the months of January through April, with 2.45 inches recorded for April (Riverside County Flood Control, 2009). This year's rainfall totals were slightly below average, especially so within the timeframe of most of the spring annuals' main growth period. Although this survey recorded the accounts of many native flowering annuals, some of the rare plants are known not to flower during drier years and this particular plant habit could account for the lack of observation of several of the rare plant species with the potential to occur on site.

In addition, exotic plants species like those found in nonnative grasslands, threaten many already rare or endangered native plant species by displacement of habitat through habitat modification (California Native Plant Society, 1998). The site in general has been subjected to many years of agricultural uses. Interviews conducted by the surveying biologist with the lessees of the land and neighbors indicate that, in addition to the current horse ranching activities, the coastal sage scrub areas north of the current ranch, were used for cattle grazing purposes in the past. Electric fence, which is used to contain livestock, was observed along the western, northern and eastern property boundaries and its presence strengthens the grazing use claims. A majority of the undeveloped portions of the site are nonnative annual grasslands and dense concentrations of nonnative annual grasses and other nonnative annuals were observed within many of the remaining sage scrub areas on site. These impacts to the native habitats found on site could also account for the lack of observation of several of the rare plant species with potential to occur.

Project-Specific threats to remaining native habitats and known occurrences of rare plant population on site include degradation and loss of habitat due to the continued spread of invasive exotic plant species, substation and associated utility line development, and the use of vehicles and heavy equipment in off-road areas.

Conclusions and Recommendations

The proposed Alberhill substation site contains a mosaic of nonnative and annual grassland and coastal sage scrub habitat. Two rare plant species, paniculate tarweed and long-spined spineflower, were found on site during Spring 2009 surveys. These two species require specific habitat conditions similar to and often associated with other identified rare plant species with the potential to occur on site. Because the site

contains these specific habitat conditions (e.g. clay soils, openings with coastal sage scrub and grassland habitats), potential exists for additional rare plant species to be observed onsite within subsequent blooming periods during more ideal environmental conditions.

The following are avoidance, minimization and mitigation measure which could be used to reduce impacts to rare plant species occurring within or adjacent to the Project Area during construction related activities:

- Avoid ground disturbing activities (grading, construction, ingress/egress, etc.) within areas known to contain rare plant populations.

- Restrict construction-related activities to already developed, disturbed or low quality habitat areas (e.g., non-native annual grassland).

- If construction related activities must occur within on site native habitat, it is suggested that each area's impact be reduced to the least degree or magnitude required by the action.

- In addition, all native habitat areas requiring construction should be (if possible) subject to a pre-construction survey to identify areas to be avoided and the information collected during the survey should be effectively communicated by the Project biologist to the Project's construction management team prior to ground breaking activities.

- It is suggested that as part of the substation planning effort, the project planning team consider adopting and implementing an invasive exotic plant management policy as part of the overall project. The goals of the policy could include stopping further introductions of invasive nonnative plant species into natural ecosystems found on site, implementation of exotic plant control measures in such a manner that native species and natural systems are not adversely impacted, and could include setting aside funding to adequately control the spread of invasive exotic species within less disturbed areas of the overall Project Area.

- Loss of on-site native habitat could be mitigated by allocating remaining on-site native habitat as a conservation easement. In addition, these on-site conservation easements could be improved by removing debris, controlling public access, and could include the implementation of a habitat management plan.

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Appendix A
Complete List of Plant Species Observed During the 2009 Rare Plant Surveys

Plant Species Observed During Rare Plant Surveys on the Proposed Alberhill Substation Site, April - May 2009

Monocots

Liliaceae

Allium haematochiton	red-skinned onion
Bloomeria crocea	common goldenstar
Calochortus splendens	lilac mariposa lily
Dichelostemma capitatum ssp. *capitatum*	bluedicks

Poaceae

Avena barbata	slender wild oats
Avena fatua	common wild oats
Avena sativa	cultivated oats
Brachypodium distachyon	false brome
Bromus diandrus	ripgut
Bromus hordeaceus	soft chess
Bromus madritensis ssp. *rubens*	red brome
Bromus tectorum	cheatgrass
Hordeum murinum	barley
Lamarckia aurea	golden top
Leymus condensatus	giant rye grass
Nassella (= Stipa) pulchra	purple needlegrass
Poa secunda	one-sided blue grass
Vulpia microstachys var. *pauciflora*	Pacific fescue
Vulpia (= Festuca) myuros	rat-tail fescue

Dicots

Anacardiaceae

Malosma laurina	laurel sumac

Apiaceae

Bowlesia incana	bowlesia
Daucus pusillus	wild carrot

Asteraceae

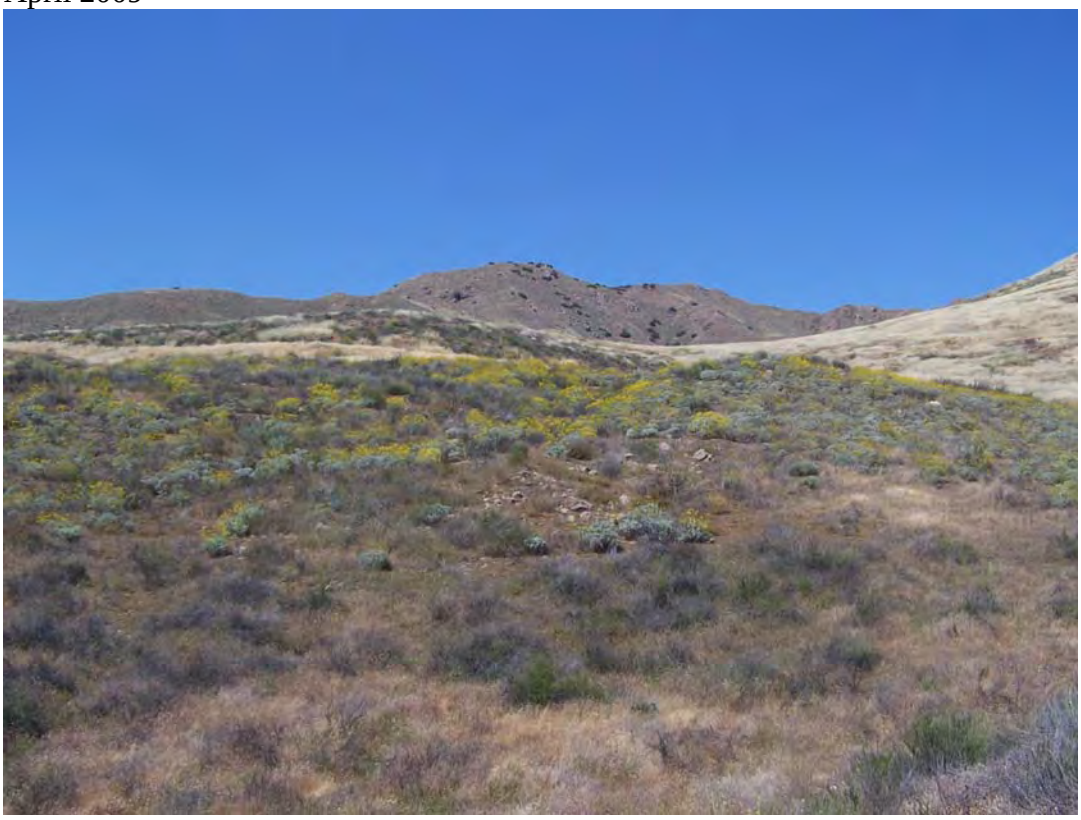
Artemisia californica	California sagebrush
Artemisia dracunculus	tarragon
Baccharis salicifolia	mulefat
Brickellia desertorum	desert brickel
Centaurea melitensis	tocalote

Chaenactis artemisiifolia	white pincushion
Encelia farinosa	brittlebush
Ericameria palmeri	Palmer's goldenbush
Eriophyllum confertiflorum	yellow yarrow
Gnaphalium californicum	California everlasting
Helianthus gracilentus	slender sunflower
Hemizonia fasciculata	slender tarweed
Hemizonia kelloggii	Kellogg's tarweed
Hemizonia (= *Deinandra*) *paniculata*	paniculate tarweed
Isocoma menziesii	Menzies' goldenbush
Lasthenia gracilis	needle goldfields
Layia platyglossa	tidytips
Lessingia filaginifolia	common sandaster
Osmadenia tenella	three spot
Boraginaceae	
Amsinckia menziesii var. *intermedia*	fiddleneck
Cryptantha intermedia	common cryptantha
Pectocarya linearis ssp. *Ferocula*	slender linearis
Brassicaceae	
Hirschfeldia incana	shortpod mustard
Lepidium lasiocarpum	shaggyfruit pepperweed
Lepidium nitidum	common peppergrass
Sisymbrium irio	London rocket
Cactaceae	
Opuntia littoralis	pricklypear
Opuntia parryi	valley cholla
Caprifoliaceae	
Sambucus mexicana	Mexican elderberry
Chenopodiaceae	
Salsola sp.	Russian thistle
Convolvulaceae	
Calystegia macrostegia	morning glory
Cucurbitaceae	
Marah macrocarpus	wild cucumber

Crassulaceae	
Crassula connata	pygmyweed
Euphorbiaceae	
Eremocarpus setigerus	doveweed
Chamaesyce albomarginata	rattlesnake weed
Ricinus communis	castorbean
Fabaceae	
Lotus scoparius	California broom
Lotus strigosus	bishop lotus
Lupinus bicolor	lupine
Geraniaceae	
Erodium botrys	filaree
Hydrophyllaceae	
Phacelia cicutaria var. *hispida*	caterpillar phacelia
Phacelia distans	distant phacelia
Phacelia minor	California bells
Plagiobothrys collinus	Cooper's popcorn flower
Lamiaceae	
Marrubium vulgare	horehound
Salvia apiana	white sage
Salvia columbariae	chia
Malvaceae	
Malva parviflora	cheeseweed
Nyctaginaceae	
Mirabilis californica	wishbone bush
Papaveraceae	
Eschscholzia californica	California poppy
Polygonaceae	
Chorizanthe polygonoides var. longispina	long-spined spineflower
Eriogonum elongatum	longstem buckwheat
Eriogonum fasciculatum	California buckwheat
Pterostegia drymarioides	pterostegia

Portulacaceae	
Calandrinia ciliata	redmaids
Plantaginaceae	
Plantago erecta	California plantain
Ranunculaceae	
Delphinium parryi ssp. parryi	San Bernardino delphinium
Rhamnaceae	
Rhamnus ilicifolia	hollyleaf redberry
Rosaceae	
Adenostoma fasciculatum	chamise
Prunus ilicifolia	holly-leafed cherry
Rubiaceae	
Galium angustifolium ssp. *angustifolium*	narrow leaf bedstraw
Scrophulariaceae	
Keckiella antirrhinoides var. *antirrhinoides*	chaparral beard tongue
Solanaceae	
Datura wrightii	datura
Nicotiana glauca	tree tobacco
Tamaricaceae	
Tamarix ramosissima	tamarisk

Appendix B
Photographs



Southeast portion of Project Area, aspect northwest.



Southeast portion of Project Area, aspect north.



Southeast portion of Project Area, aspect west.



Southeast portion of Project Area, aspect east



Mid-east boundary of Project Area, aspect southwest



Mid-east boundary of Project Area, aspect north.



Mid-east boundary of Project Area, aspect west.



Mid-Project Area, aspect east



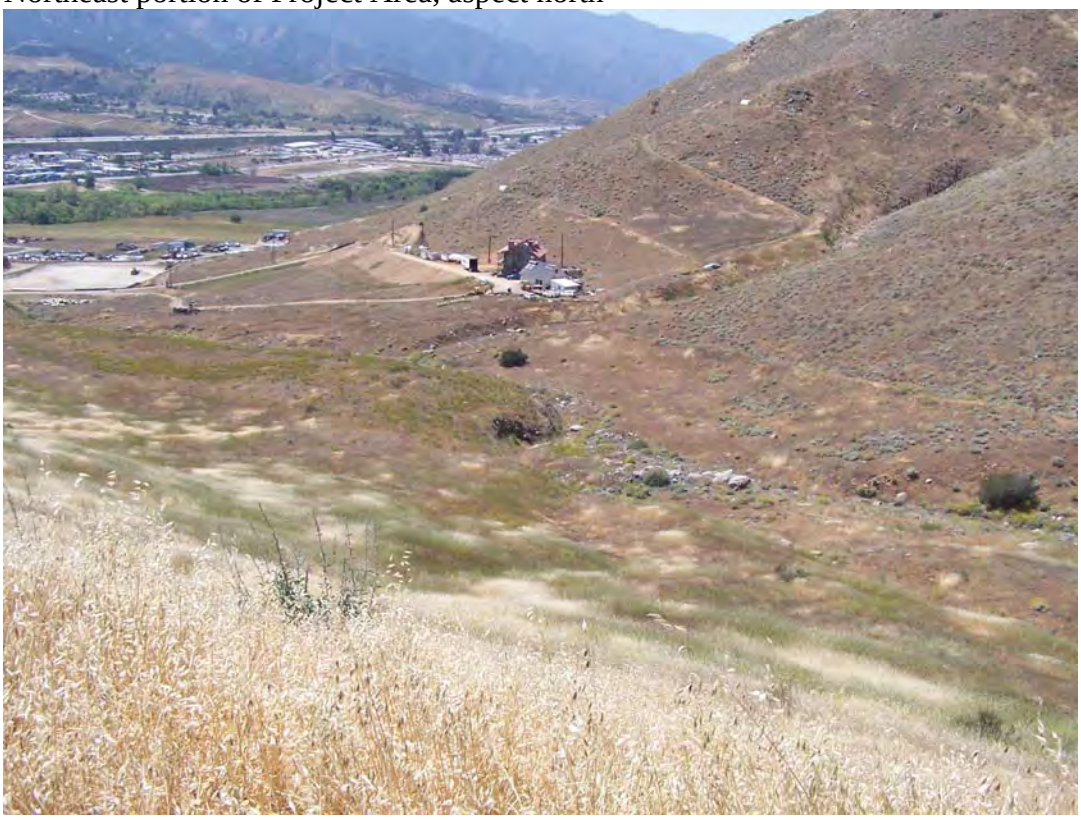
Mid-Project Area, aspect north.



Mid-Project Area, aspect southeast



Northeast portion of Project Area, aspect north



Northeast portion of Project Area, aspect west.



Northeast portion of Project Area, aspect southwest



Northern boundary of Project Area, aspect southwest



Northern boundary of Project Area, aspect southwest



Northwest corner of Project Area, aspect south.



Northern boundary of Project Area, aspect west, view of northwest corner.



Northern boundary of Project Area, aspect east, view of northeast corner.

May 2009



Chorizanthe polygonoides var. *longispina* observed within the Project Area



View of one *Chorizanthe polygonoides* var. *longispina* population observed within the Project Area.



Hemizonia (=*Deinandra*) *paniculata* observed within the Project Area.



Southeast portion of Project Area (steer pen), aspect north.



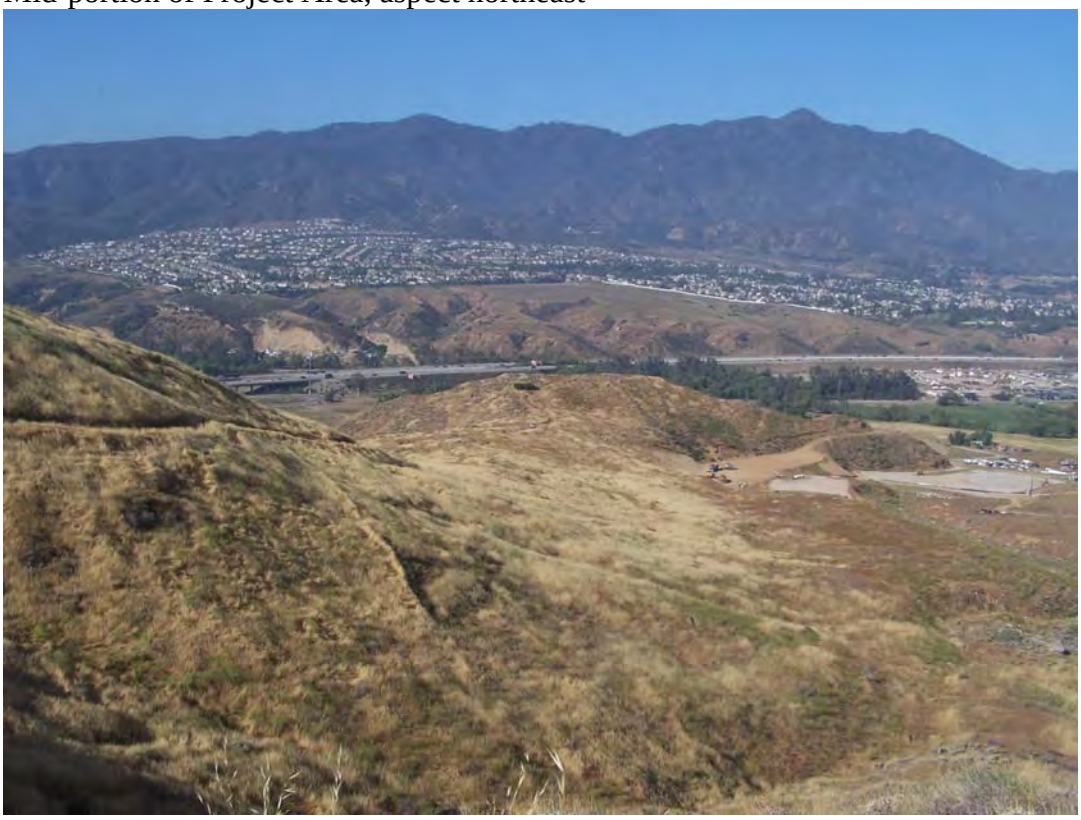
Southeast portion of Project Area (steer pen), aspect southwest



Example of opening within non-native annual grassland habitat.



Mid-portion of Project Area, aspect northeast



Northern boundary of Project Area, aspect southwest



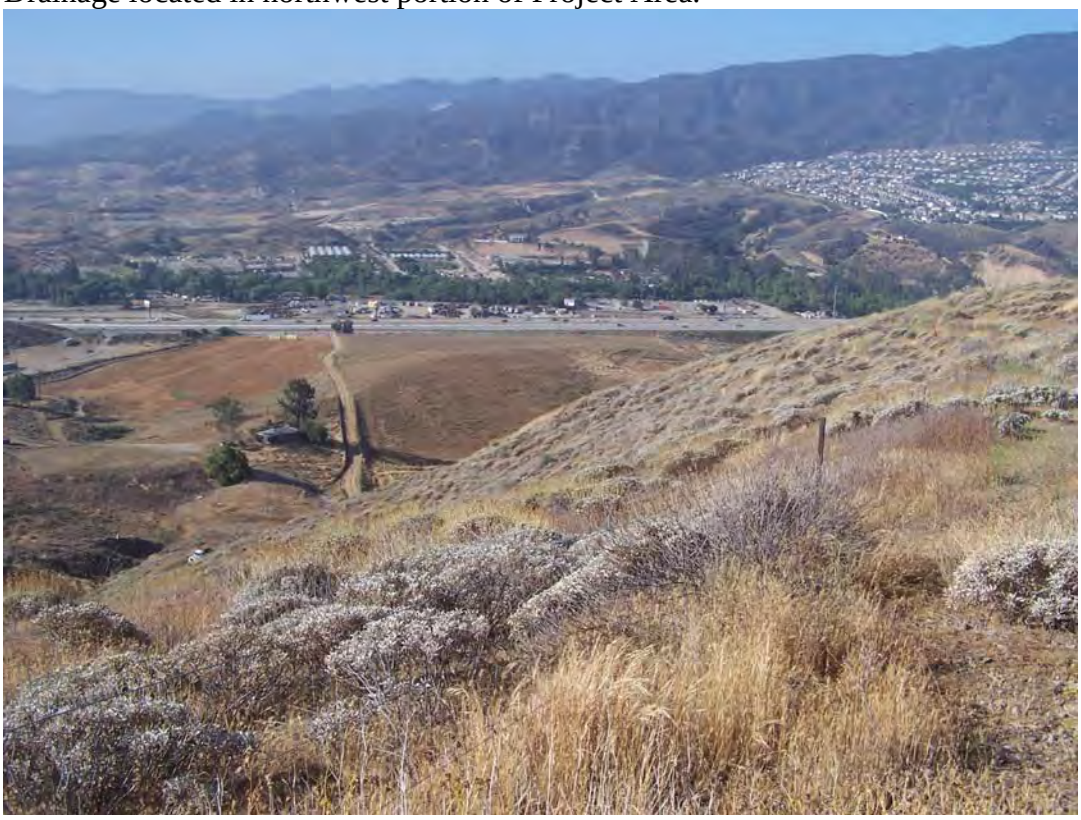
Northeast corner of Project Area, aspect south, northern portion of eastern boundary



Northeast corner of Project Area, aspect west, toward northwest corner.



Drainage located in northwest portion of Project Area.



Northern portion of Project Area's eastern boundary, aspect south.



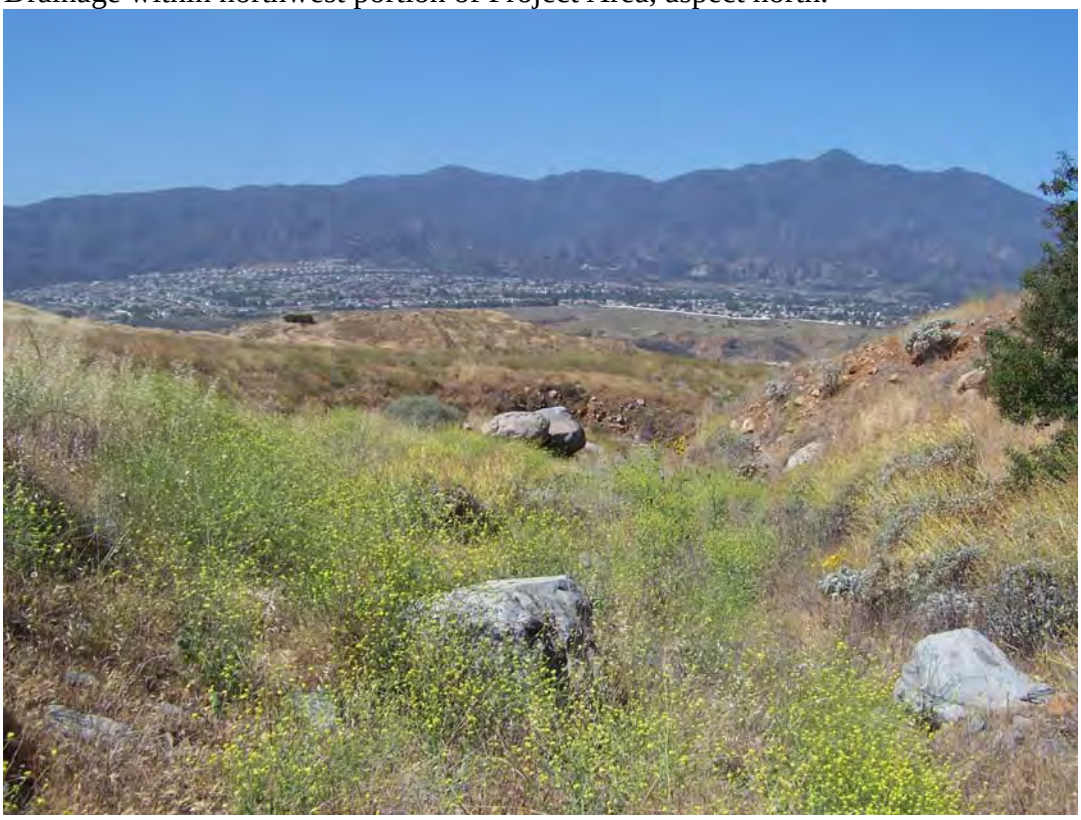
Northern portion of Project Area, aspect southwest.



Northern portion of Project Area, aspect west.



Drainage within northwest portion of Project Area, aspect north.



Drainage within northwest portion of Project Area, aspect south.



Northwest portion of the Project Area, aspect northeast.



From western boundary, aspect north east.



Northwest corner, aspect south, view of western boundary.



Area north of horse track, aspect southwest



Southeast portion of Project Area, aspect northwest



Southeast portion of Project Area, aspect north.

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Alberhill Substation Project
Focused Surveys for the Southwestern Willow Flycatcher, Least Bell's Vireo, and Coastal California Gnatcatcher

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3 August 2009

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Alberhill Substation Project: Focused Surveys for the Southwestern Willow Flycatcher, Least Bell's Vireo, and Coastal California Gnatcatcher

1.0 INTRODUCTION

This report presents the findings of focused surveys for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*), Least Bell's Vireo (*Vireo bellii pusillus*), and Coastal California Gnatcatcher (*Polioptila californica californica*) on and immediately adjacent to Southern California Edison's (SCE) proposed Alberhill Substation Project site and the associated property around it (see Map 1). The substation will be built primarily on already developed lands at the southwestern portion of the property. Linear power corridors associated with this substation will eventually cross other portions of the property.

The entire property is in the unincorporated Alberhill community of Riverside County roughly bounded by Love Lane on the north, Temescal Canyon Road to the west, Black Powder Lane on the east, Concordia Ranch Road on the south. Also, just south of Concordia Ranch Road is Interstate 15. More specifically, the property is located in Section 16, Township 5 South, Range 5 West, as depicted on the United States Geological Survey (USGS) 7.5 minute *Alberhill, California* quadrangle (see Map 3). Elevations range from approximately 1180 – 1635 feet.

The approximate southwest third of the property is relatively level and is an active horse ranch. Within the developed area is an artificial pond, now mostly dry, with a limited amount of marginal quality riparian vegetation around it. The approximate northeastern two-thirds of the property is hilly and covered with a matrix of non-native grassland and patches of low to moderate quality Riversidean Sage Scrub. Moderate to high quality riparian habitat associated with Temescal Wash occurs offsite to the immediate southwest of the property. A three acre portion of this offsite riparian area has been protected under a conservation agreement (not associated with this project). Several rural residences and businesses are scattered in the area around the property, but for the most part the site is surrounded by open space to the north, east, and west. The north property line is contiguous with the Lake Mathews Estelle Mountain Reserve. The surrounding area is somewhat more developed to the south, beyond Interstate 15.

The patches of low to moderate quality sage scrub habitat are suitable for the Coastal California Gnatcatcher. There is additional, similar, gnatcatcher offsite habitat north and east of the property, and patches of habitat offsite to the south along Interstate 15. The marginal riparian habitat around the artificial pond is suitable for the Least Bell's Vireo. The offsite riparian habitat is also suitable for the vireo, and is also suitable for the Southwestern Willow Flycatcher, especially the patch immediately across from the southwest corner of the site. See Maps 2 and 3 for areas that were surveyed for these species.

1.1 Background on the Southwestern Willow Flycatcher

The Southwestern Willow Flycatcher (SWF) is a small, brownish-olive flycatcher that was formerly considered a common summer resident in Southern California's lowland willow thickets and in mountain canyons (Garrett and Dunn 1981). Following the large-scale invasion of the coastal lowlands by Brown-headed Cowbirds (*Molothrus ater*) in the 1920s, along with loss and degradation of riparian habitats, the SWF was nearly extirpated from Southern California, and the population remains critically low. All subspecies of Willow Flycatcher were listed by the State of California as Endangered in 1990 (California Department of Fish and Game 1990, California Code of Regulations 2009). The subspecies *E. t. extimus* (the SWF) was listed as Endangered by the United States Fish and Wildlife Service (USFWS) in February 1995 (USFWS 1995). The USFWS made its final rule on critical habitat for the SWF in October 2005 (USFWS 2005). This site is not in critical habitat.

Surveys in recent years have revealed surviving populations in riparian habitats associated with the Santa Margarita and San Luis Rey rivers in San Diego County; the Mojave River and a few riparian systems in the San Bernardino Mountains in San Bernardino County; the Santa Ynez River in Santa Barbara County; the Santa Clara River in Los Angeles and Ventura counties; and the South Fork of the Kern River in Kern County (Unitt 1987, Marshall 2000). The SWF also persists in the Lower Colorado River Valley (Marshall 2000), as well as in a few other scattered locations in Southern California.

The SWF breeds in dense riparian habitats near surface water or saturated soil. Habitat plant composition and structure can vary greatly depending on the site, but willows often make up much of the understory. Breeding SWFs along the Colorado River may use thickets dominated by both native and non-native plants. Dense patches of understory vegetation are a critical component of occupied habitat (Sogge *et al.* 1997).

1.2 Background on the Least Bell's Vireo

The Least Bell's Vireo (LBV) is a small, migratory, insectivorous bird which occurs in willow-dominated riparian habitats. Although this bird is drab in plumage and can be secretive within its densely vegetated habitat, males are nonetheless easy to detect on the breeding grounds due to their conspicuous and diagnostic song. Nesting habitat of this species is generally restricted to willow and/or mulefat dominated riparian scrub along permanent or nearly permanent streams (Grinnell and Miller 1944, Goldwasser 1978, Franzreb 1987, Garrett and Dunn 1981).

LBVs were formerly widespread and common throughout low-lying riparian habitats of central and southern California, but are now restricted to a limited number of locations in Southern California. Habitat loss and degradation has contributed to this species' significant population declines. Nest parasitism by Brown-headed Cowbirds has also seriously impacted reproductive success by LBVs, as well as many other species which build cup nests (Goldwasser 1978). The LBV was listed as Endangered by the State of California in 1980 (California Code of Regulations 2009) and by the USFWS in 1986 (USFWS 1986). This site is not in designated critical habitat for this species (USFWS 1994).

1.3 Background on the Coastal California Gnatcatcher

The Coastal California Gnatcatcher (CAGN) is a small, mostly gray, non-migratory songbird found in southern California primarily in areas with coastal sage scrub vegetation communities. Several studies have revealed severely reduced population levels of CAGNs and major habitat loss. Various experts have calculated that 85-90% of California's original sage scrub cover has been removed (Westman 1981, O'Leary and Westman 1988). The CAGN was listed as a federally Threatened species by the USFWS on 25 March 1993 (USFWS 1993). The project site is within revised Critical Habitat for the CAGN (USFWS 2007).

2.0 METHODS

Appropriate habitats were surveyed in accordance with the currently accepted survey protocols for the SWF, LBV, and CAGN (Sogge *et al.* 1997, USFWS 2001 & 1997b respectively). The SWF protocol requires five survey visits, with the first survey performed between 15 May and 31 May, the second between 1 June and 21 June, and three visits between 22 June and 17 July. Visits must be at least five days apart. The LBV protocol recommends at least eight survey visits between 10 April and 31 July with visits at least ten days apart. The CAGN protocol

specifies that during the breeding season (defined as 15 March through 30 June) at least six survey visits be performed a minimum of one week apart. When CAGN and/or riparian bird (LBV/SWF) surveys were conducted on the same day, riparian bird surveys were done first (SWF and LBV concurrently), followed by CAGN surveys.

The survey visits consisted of slowly moving through the habitat while listening for the songs and calls of the three target species. During the surveys performed for the CAGN and SWF, recordings of their vocalizations were broadcast, as required by protocol. All bird species detected during the surveys were recorded in field notes and are included in Appendix 1 below.

Surveys were performed by AMEC biologists John F. Green (federal Endangered Species Permit TE054011-2) and Chet M. McGaugh (TE836517-5) on the following days:

Table 1. Survey Information

Date & Survey(s)	Observer(s)	Time	Temp. (°F)	Wind (mph)	Sky (% cover)
9 April 2009 CAGN1	John F. Green	0650-1145	48-67	1-2	70-45
16 April 2009 CAGN2/LBV1	John F. Green	0720-1150	49-69	0-1	0-trace
27 April 2009 CAGN3/LBV2	John F. Green	0655-1055	55-61	1	100
12 May 2009 CAGN4/LBV3	John F. Green	0705-1105	59-70	1-3	100-trace
22 May 2009 CAGN5/LBV4/SWF1	John F. Green	0645-1145	57-77	1-3	Trace-45
3 June 2009 CAGN6/LBV5/SWF2	John F. Green	0645-1120	62-68	1-2	95-100
22 June 2009 LBV6/SWF3	Chet McGaugh	0655-0815	65-75	0	0
30 June 2009 SWF4	Chet McGaugh	0650-0840	warm	-	0
13 July 2009 LBV7/SWF5	John F. Green	0620-0705	64-70	0-1	trace-0
23 July 2009 LBV8	Chet McGaugh	0700-0900	74-85	0	trace

3.0 RESULTS

3.1 Habitat Description

The CAGN survey area contains large areas dominated by non-native grasses and weeds. Where patches of Riversidean Sage Scrub occur within the survey area, dominant plant species include California Buckwheat *(Eriogonum fasciculatum),* and Brittlebush (*Encelia farinosa*). The LBV survey areas are dominated by a light to dense cover of Mulefat (*Baccharis salicifolia*) and willows (*Salix* sp.). The denser areas of this habitat are also suitable for SWF. See Maps 2 and 4.

3.2 Survey Results

3.2.1 Southwestern Willow Flycatcher

No SWF or any other subspecies of Willow Flycatcher were found.

3.2.2 Least Bell's Vireo

Single, singing Least Bell's Vireos were found on three survey visits (see Maps 2 & 3, **Cover Photo**, and Photos 4 & 5). Two of these detections (22 June and 23 July) were at the same spot (see Map 2 near the corner of Temescal Canyon Road and Love Lane), and are assumed to represent the same individual bird. Because this bird was missed on most visits, and because this was at the edge of the riparian habitat, it is likely that these two detections represented a bird singing at the far edge of his territory. The third detection was of a LBV that was singing from over 300 feet west of the site on 30 June. Since this last detection occurred only once, in late June, it is possible that it represented a post-breeding bird dispersing from its territory. All detections were offsite (see Maps 2 and 3).

3.2.3 Coastal California Gnatcatcher

Two detections were made, both on 22 May. Both were of a female CAGN (see Maps 2 & 3 and Photos 2 & 6). The first detection was near the center of the property. This bird was last seen moving southeast. One hour and fifteen minutes later, an identical looking bird was found along the east boundary of the property. This bird then continued east offsite. Given the timing and direction of these detections, and the lack of any other detections during this entire focused survey, those two detections are believed to represent a single dispersing bird.

4.0 DISCUSSION AND SUMMARY

Patches of low to moderate quality sage scrub habitat suitable for the Coastal California Gnatcatcher exist on the undeveloped portions of the property to the north and east. The edges of these patches could suffer direct impacts (such as sage scrub removal), and larger areas could suffer indirect impacts from substation construction (such as dust and noise). Direct and/or indirect impacts from linear power corridor construction could also occur. There is additional CAGN habitat north and east of the property, and patches of habitat to the south along Interstate 15, which could be indirectly impacted. A small patch of marginal Mulefat Scrub habitat (the artificial pond) suitable for the Least Bell's Vireo is within the footprint of the proposed substation site, and it will be directly impacted (eliminated) by the project. Moderate to high quality LBV habitat is immediately offsite to the west and southwest. This offsite habitat is also suitable for the Southwestern Willow Flycatcher (SWF), especially the patch immediately across from the southwest corner of the site. Offsite areas will not be directly impacted, but could suffer indirect impacts.

No suitable SWF habitat occurs on site, as the artificial pond does not contain the overstory and understory components required for this bird. Also, no SWFs were found in appropriate habitat offsite. Therefore, this species is considered absent from the site and the immediate vicinity at this time. Least Bell's Vireo was not detected in the limited onsite habitat, but there appears to be at least one territory in habitat immediately adjacent to the site. This adjacent habitat may suffer indirect impacts from the project such as noise and dust, but it should be noted that this habitat is already impacted by constant traffic disturbance from nearby Interstate 15 (noise, light, etc.), and by Temescal Canyon Road. No critical habitat is designated for LBV or SWF in the project area.

Suitable CAGN habitat exists onsite, and this area is within designated critical habitat for the species, but only one CAGN (possibly two) utilized the site during the focused survey. At a minimum, this site provides a corridor for dispersing CAGNs, but it could be used in the future by breeding birds as well. Mitigation requirements for potential impacts to these species should be determined in consultation with the USFWS and CDFG, or by participation in the Western Riverside County Multiple Species Habitat Conservation Plan. If work does not commence within one year of the completion of these focused surveys, repeat surveys are likely to be required.

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APPENDIX 1: BIRD SPECIES LIST

This list reports only birds or their sign observed on the site by this study. Other species may have been overlooked or undetectable due to their nocturnal and/or subterranean activity patterns. Nomenclature and taxonomy for birds observed on site generally follows the American Ornithologists' Union Checklist (1998) and its supplements.

SYMBOLS AND ABBREVIATIONS:

sp.-Identified only to genus; species unknown plural = spp.
* Non-native species
** Sensitive species (State or Federally Listed as Threatened or Endangered, or a CDFG Species of Special Concern, or a USFWS Bird of Conservation Concern)

BIRDS	AVES
New World Quail	**Odontophoridae**
California Quail	*Callipepla californica*
Cormorants	**Phalacrocoracidae**
**Double-crested Cormorant	*Phalacrocorax auritus*
Bitterns and Herons	**Ardeidae**
Great Blue Heron	*Ardea herodias*
Great Egret	*Ardea alba*
Snowy Egret	*Egretta thula*
Green Heron	*Butorides virescens*
Black-crowned Night-Heron	*Nycticorax nycticorax*
American Vultures	**Cathartidae**
Turkey Vulture	*Cathartes aura*
Hawks, Kites, Eagles	**Accipitridae**
**Osprey	*Pandion haliaetus*
Red-tailed Hawk	*Buteo jamaicensis*
**Golden Eagle	*Aquila chrysaetos*
Falcons	**Falconidae**
American Kestrel	*Falco sparverius*
Plovers and Lapwings	**Charadriidae**
Killdeer	*Charadrius vociferus*
Gulls, Terns, and Skimmers	**Laridae**
**California Gull	*Larus californicus*
Pigeons and Doves	**Columbidae**
*Rock Pigeon	*Columba livia*
*Eurasian Collared-Dove	*Streptopelia decaocto*
Mourning Dove	*Zenaida macroura*

Swifts	**Apodidae**
White-throated Swift	*Aeronautes saxatalis*
Hummingbirds	**Trochilidae**
Black-chinned Hummingbird	*Archilochus alexandri*
Anna's Hummingbird	*Calypte anna*
Costa's Hummingbird	*Calypte costae*
Rufous/Allen's Hummingbird	*Selasphorus sp.*
Woodpeckers and Allies	**Picidae**
Nuttall's Woodpecker	*Picoides nuttallii*
Downy Woodpecker	*Picoides pubescens*
Northern Flicker	*Colaptes auratus*
Flycatchers	**Tyrannidae**
Pacific-slope Flycatcher	*Empidonax difficilis*
Black Phoebe	*Sayornis nigricans*
Say's Phoebe	*Sayornis saya*
Ash-throated Flycatcher	*Myiarchus cinerascens*
Cassin's Kingbird	*Tyrannus vociferus*
Western Kingbird	*Tyrannus verticalis*
Vireos	**Vireonidae**
**Least Bell's Vireo	*Vireo bellii pusillus*
Jays, Magpies and Crows	**Corvidae**
American Crow	*Corvus brachyrhynchos*
Common Raven	*Corvus corax*
Larks	**Alaudidae**
**California Horned Lark	*Eremophila alpestris actia*
Swallows	**Hirundinidae**
Tree Swallow	*Tachycineta bicolor*
Violet-green Swallow	*Tachycineta thalassina*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Cliff Swallow	*Petrochelidon pyrrhonota*
Barn Swallow	*Hirundo rustica*
Long-tailed Tits and Bushtits	**Aegithalidae**
Bushtit	*Psaltriparus minimus*
Wrens	**Troglodytidae**
Rock Wren	*Salpinctes obsoletus*
House Wren	*Troglodytes aedon*
Bewick's Wren	*Thryomanes bewickii*
Old World Warblers and Gnatcatchers	**Sylviidae**
**Coastal California Gnatcatcher	*Polioptila californica californica*
Babblers	**Timaliidae**
Wrentit	*Chamaea fasciata*
Mockingbirds, Thrashers, and Allies	**Mimidae**
Northern Mockingbird	*Mimus polyglottos*
California Thrasher	*Toxostoma redivivum*

Starlings and Allies	**Sturnidae**
*European Starling	*Sturnus vulgaris*
Wood-Warblers	**Parulidae**
**Yellow Warbler	*Dendroica petechia brewsteri*
Common Yellowthroat	*Geothlypis trichas*
Emberizines	**Emberizidae**
Spotted Towhee	*Pipilo maculatus*
California Towhee	*Pipilo crissalis*
**Southern California Rufous-crowned Sparrow	*Aimophila ruficeps canescens*
Song Sparrow	*Melospiza melodia*
White-crowned Sparrow	*Zonotrichia leucophrysv*
Cardinals, Grosbeaks, and Allies	**Cardinalidae**
Black-headed Grosbeak	*Pheucticus melanocephalus*
Blue Grosbeak	*Guiraca caerulea*
Lazuli Bunting	*Passerina amoena*
Blackbirds and Allies	**Icteridae**
Red-winged Blackbird	*Agelaius phoeniceus*
**Tricolored Blackbird	*Agelaius tricolor*
Western Meadowlark	*Sturnella neglecta*
Brewer’s Blackbird	*Euphagus cyanocephalus*
Brown-headed Cowbird	*Molothrus ater*
Hooded Oriole	*Icterus cucullatus*
Bullock's Oriole	*Icterus bullockii*
Finches and Allies	**Fringillidae**
House Finch	*Carpodacus mexicanus*
Lesser Goldfinch	*Spinus psaltria*
American Goldfinch	*Spinus tristis*
Old World Sparrows	**Passeridae**
*House Sparrow	*Passer domesticus*

APPENDIX 2: PHOTOS



Photo 1. Looking ~north from south central area of site at Brittlebush and/or California Buckwheat dominated sage scrub & non-native dominated patches. Distant hilltops to center & left are offsite within Lake Mathews Estelle Mountain Reserve.



Photo 2. Looking ~east from west edge of onsite LBV habitat. Marginal mulefat scrub habitat in foreground (artificial pond), & patchy sage scrub on hillside beyond, where one CAGN detection occurred.



Photo 3. Looking ~west-northwest from corner of Concordia Ranch Road & Temescal Canyon Road. Strip of willows visible in lower left hand quarter of photo is offsite along Temescal Canyon Road, directly across the street from the project. This strip was surveyed for LBV & SWF with no detections.



Photo 4. Looking ~west from ~southwest-most corner of site at the corner of Zeigler and Temescal Canyon Roads (Zeigler is a spur ~across from Love Lane). High quality willow riparian habitat here. A singing LBV was detected at this point twice. A three acre portion of this offsite riparian area has been protected under a conservation agreement.



Photo 5. Looking ~northwest across Love Lane at the ~southwest-most corner of site. Narrow riparian corridor is offsite near property boundary, with wider riparian diverging away from site to the north-northwest. A singing LBV was heard once in the wider riparian, well offsite.



Photo 6. Female Coastal California Gnatcatcher detected on 22 May 2009. Also see cover photo of Least Bell's Vireo detected on 22 June 2009.



Photo 7. Looking ~north from corner of Concordia Ranch Road & Temescal Canyon Road at typical developed conditions over most of the proposed substation footprint.

APPENDIX 3
Maps



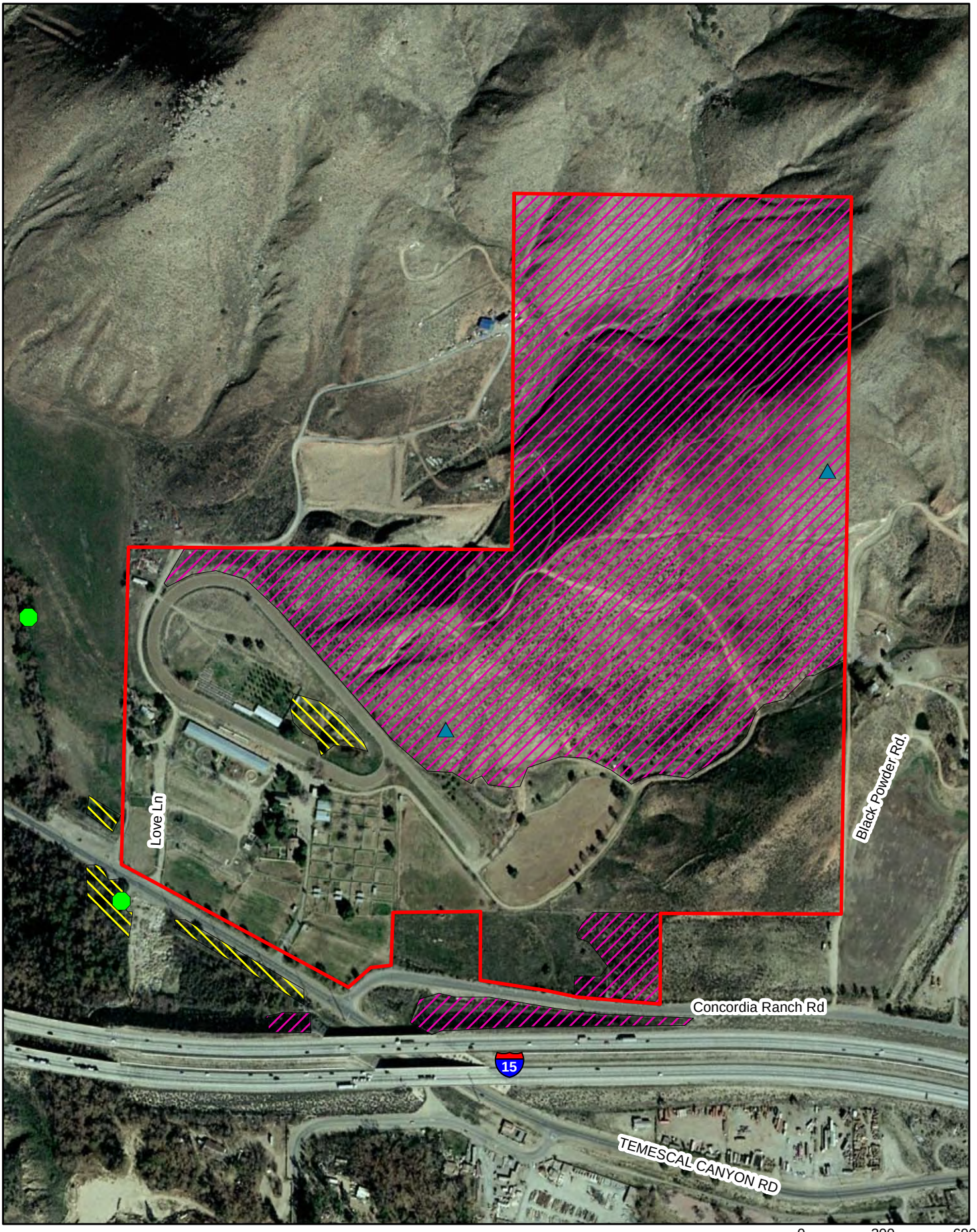
Map 1. Alberhill: Vicinity & Location

Site Boundary

0 1,250 2,500
Feet

N

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Map 2. Alberhill: CAGN, LBV & SWF Survey Areas

Site Boundary

Survey area for CAGN

Survey area for LBV & SWF

California Gnatcatcher

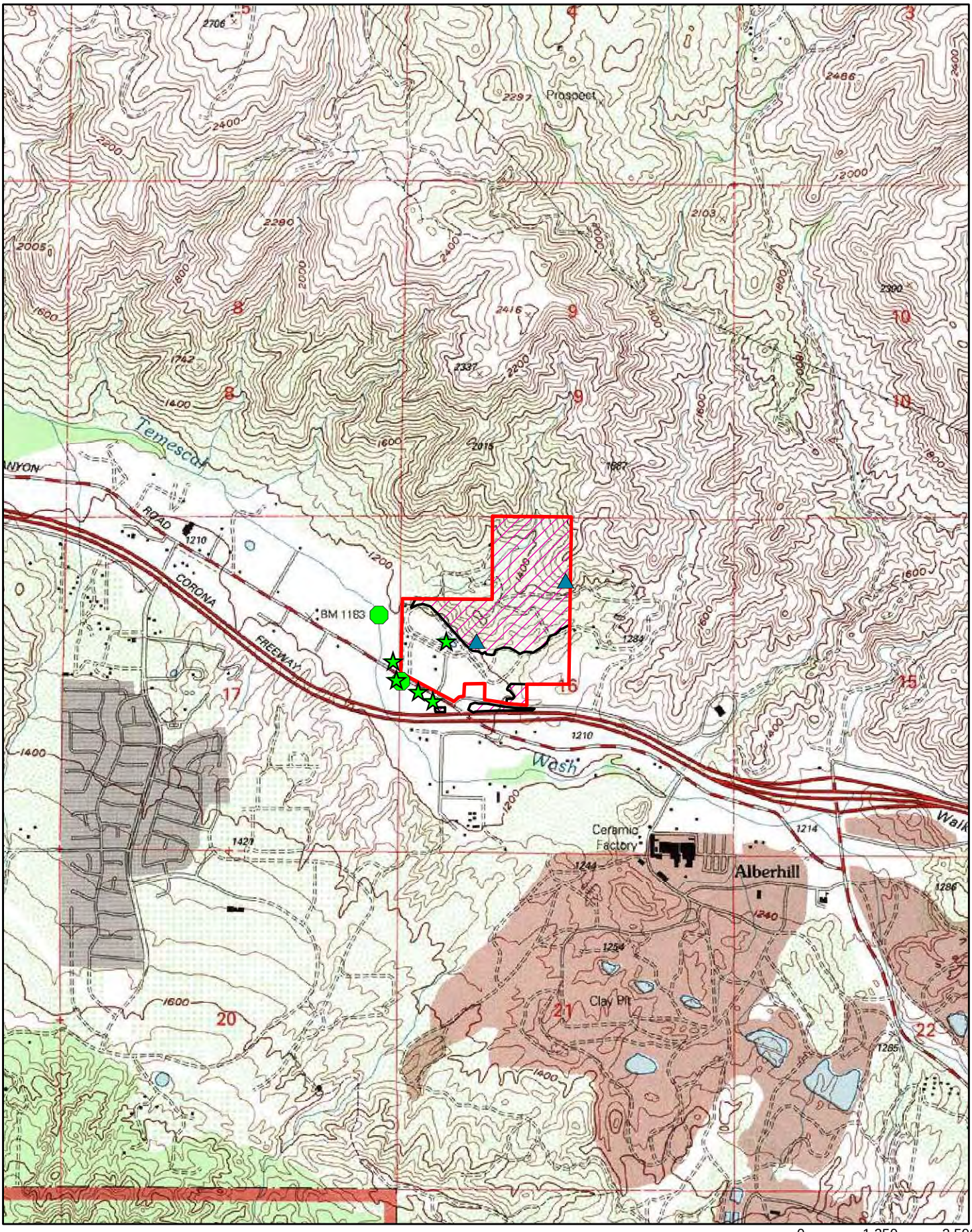
Least Bell's Vireo

0 300 600

Feet

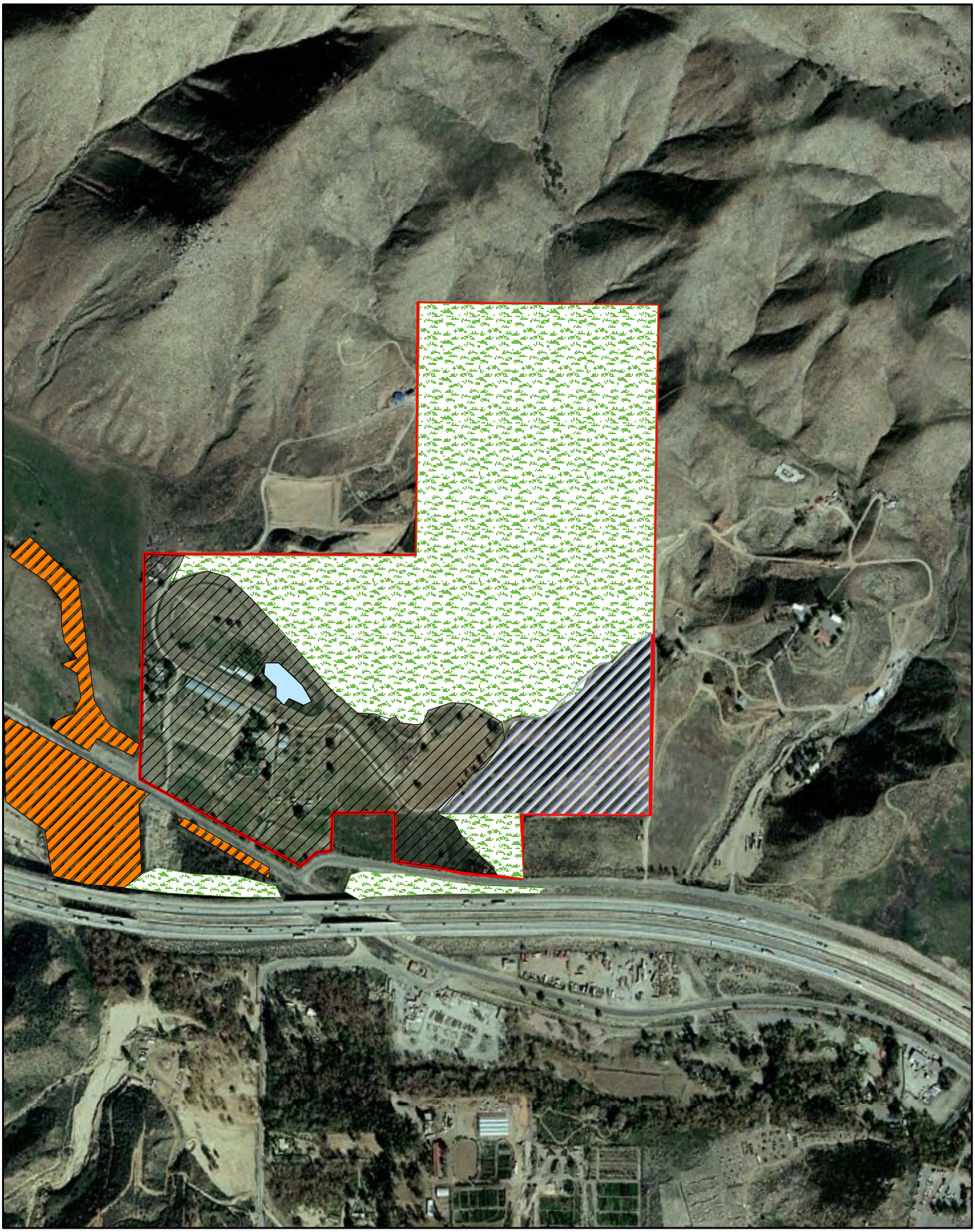
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Map 3. Alberhill: CAGN, LBV & SWF Survey Areas

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Map 4. Alberhill: Vegetation

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FORENSIC ENTOMOLOGY SERVICES

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San Diego, California 92115-2217
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[redacted]
Email: Dkfaulkner41@cox.net

15 May 2009

Adelina O. Munoz, Biologist
G.O. 1, Quad 3A, 304F
2244 Walnut Grove Avenue
Rosemead, California 91770

RE: Alberhill Substation
2009 Quino Checkerspot Surveys

Adelina:

Enclosed is the report on the Alberhill Substation Site for Quino Checkerspot surveys completed this year. All protocol surveys were negative for this insect during the 2009 flight season. I have submitted copies of the report to the US Fish and Wildlife Service. Let me know if you have any questions.

David K. Faulkner
Entomologist

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San Diego, California 92115-2217
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1 May 2009

Adelina O. Munoz, Biologist
G.O. 1, Quad 3A, 304F
2244 Walnut Grove Avenue
Rosemead, California 91770

RE: Alberhill Substation Site, Riverside County
Quino Checkerspot Butterfly Protocol Surveys, 2009

INTRODUCTION. Protocol surveys for the federally listed Quino Checkerspot Butterfly (QCB), *Euphydryas editha quino* (Lepidoptera: Nymphalidae), were conducted on the Alberhill Substation site for the Southern California Edison Company. Surveys were initiated on 8 March 2009 following a site assessment completed on 6 March 2009, and terminated on 11 April 2009. For Riverside County, adult QCB were observed during the week previous to the surveys and were ended when no primary or secondary host plants were available for the insects to oviposit. The site is approximately 80 acres and is situated mostly east of an existing facility that maintains horses. Isolated and somewhat disturbed habitat is located north and south of the ranch. Most of the property consists of coastal sage scrub vegetation, grasslands, and established dirt roads containing many of the physical features associated with QCB such as ridgelines, hilltops, gradual south and southwest facing slopes, open soils, rock outcrops, and appropriate adult nectar sources and larval host plants (*Plantago erecta*, *Castilleja exerta*).

The entire 80 acres was surveyed during each visit, concentrating on areas containing larval host plants, hilltops, and abundant nectar sources for adult QCB. No attempt was made to look for larvae, although any Lepidoptera caterpillars seen were recorded. The survey route varied from week to week in order to cover all sites at different times of the day. Some areas were excluded after they were found to be steep slopes, impacted by current grazing, or closed in by vegetation. Weather conditions were favorable during each protocol visit (Table 1), and all butterfly species observed were recorded (see Butterfly List). Digital images were taken of the property and specific locations containing QCB larval host plants.

RESULTS. No Quino Checkerspot butterflies were observed during the six protocol surveys conducted from 8 March through 11 April 2009. This time frame corresponded to the adult QCB flight period for western Riverside County. The habitat contained many of the features known to support QCB populations elsewhere in southern California and is located just west of designated Critical Habitat for recovery of this species by the U.S. Fish and Wildlife Service. Weather conditions for each protocol survey visit are given in Table 1.

Table 1. Weather Conditions (2009)

Date	Time	Weather (°F)	Purpose
6 March	1030-1430	----------	Site Assessment
8 March	0930-1630	65/68, clear, 0-3 mph wind	Protocol Survey
16 March	0930-1630	68/74, clear, 3-7 mph wind	Protocol Survey
23 March	1000-1630	66/70, clear, 0-7 mph wind	Protocol Survey
29 March	0900-1500	65/75, clear, 0-3 mph wind	Protocol Survey
5 April	0900-1500	72/81, clear, 4-9 mph wind	Protocol Survey
11 April	0900-1600	65/69, high clouds/clear, 1-5 mph wind	Protocol Survey

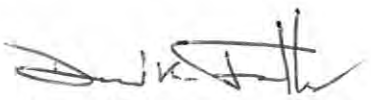
Butterflies were recorded from each protocol survey visit and are listed below. In all, 28 species of butterflies and skippers were seen on the property.

Butterflies and Skippers

Papilio zelicaon	Anise swallowtail
P. eurymedon	Pale swallowtail
Pieris rapae	Cabbage white
Pontia protodice	Checkered White
Anthocharis sara	Sara orangetip
A. cethura	Desert orangetip
Colias eurytheme	Alfalfa butterfly
C. harfordii	Harford's sulphur
Nathalis iole	Dainty yellow
Strymon melinus	Common hairstreak
Callophrys augustinus	Brown elfin
C. perplexa	Perplexing hairstreak
Glaucopsyche lygdamus australis	Southern blue
Leptotes marina	Marine blue
Brephidium exile	Pygmy blue
Celastrina echo	Echo blue
Plebejus acmon	Acmon blue
Apodemia virgulti	Behr's metalmark
Chlosyne gabbii	Gabb's checkerspot
Vanessa cardui	Painted lady
V. virginiensis	American lady
V. annabella	West coast lady
Junonia coenia	Buckeye butterfly
Erynnis funeralis	Funereal duskywing
E. propertius	Propertius duskywing
Pyrgus albescens	Checkered skipper
Hylephila phyelus	Fiery skipper
Atalopedes campestris	Sachem skipper

SUMMARY. Although weather and habitat conditions were suitable for adult QCB to be seen if present, no adults were observed during the 2009 adult flight season. Adults were recorded from other locations in eastern Riverside County, but not on the Alberhill property at this time.

Included at the end of this report are digital images of the site and habitat along with maps showing the location of the property and significant populations of the QCB primary larval host, P. erecta.



David K. Faulkner
Entomologist
USFWS Permit #838743-5

Project Name: ALBERHILL Acreage Surveyed: ~80 Biologist: David K. Faulkner Date: 8 March 2009 #1

Survey Start: 0930 Survey End: 1630 Area Surveyed (Portion of Site): ALL QCB Detected (Circle) (N)

Time:	0930	1200	1400	1630			
Temp. °F	65	66	68	68			
Wind Speed (Beaufort):	0	1	1	3			
% Cloud Cover:	0	0	0	0			

Butterfly Species Observed / Relative Abundance: U = Uncommon (1-3) O = Occasional (4-15) C = Common (16-40) A = Abundant (Over 40)

___/___ *Papilio rutulus* (Western Tiger Swallowtail)
___/___ *Papilio zelicaon* (Anise Swallowtail)
___/___ *Papilio eurymedon* (Pale Swallowtail)
___/___ *Papilio cresphontes* (Giant Swallowtail)
___/___ *Papilio polyxenes coloro* (Desert Swallowtail)
___/___ *Pieris rapae* (Cabbage White)
X/C *Pontia protodice* (Checkered White)
___/___ *Pontia beckeri* (Becker's White)
X/U *Pontia sisymbrii* (Spring White)
___/___ *Euchloe hyantis* (Pearly Marble)
___/___ *Anthocharis lanceolata* (Gray Marble)
___/___ *Anthocharis sara* (Sara Orangetip)
X/O *Anthocharis cethura* (Desert Orangetip)
X/O *Colias eurytheme* (Orange Sulphur)
___/___ *Colias harfordii* (Harford's Sulphur)
___/___ *Colias cesonia* (Southern Dogface)
___/___ *Colias eurydice* (California Dogface)
___/___ *Eurema nicippe* (Sleepy Orange)
___/___ *Nathalis iole* (Dainty Sulphur)
___/___ *Phoebus sennae* (Cloudless Sulphur)
X/U *Strymon melinus* (Gray Hairstreak)
___/___ *Atlides halesus* (Great Purple Hairstreak)
X/U *Callophrys augustinus* (Brown Elfin)
X/O *Callophrys perplexa* (Perplexing Hairstreak)
___/___ *Everes amyntula* (Western Tailed Blue)
X/U *Glaucopsyche lygdamus australis* (Southern Blue)
___/___ *Leptotes marina* (Marine Blue)
___/___ *Brephidium exile* (Pygmy Blue)
___/___ *Hemiargus ceraunus gyas* (Edward's Blue)
___/___ *Hemiargus isola* (Reakirt's Blue)
___/___ *Philotes sonorensis* (Sonora Blue)
___/___ *Celastrina echo* (Echo Blue)
X/O *Plebejus acmon* (Acmon Blue)
___/___ *Plebejus icarioides* (Boisduval's Blue)
___/___ *Euphilotes bernardino* (Bernardino Blue)
___/___ *Calephelis wrightii* (Wright's Metalmark)
___/___ *Apodemia virgulti* (Behr's Metalmark)
___/___ *Agraulis vanillae* (Gulf Fritillary)
___/___ *Phyciodes mylitta* (Mylitta Crescent)
___/___ *Chlosyne gabbii* (Gabb's Checkerspot)
___/___ *Chlosyne californica* (California Patch)
___/___ *Chlosyne leanira* (Wright's Checkerspot)
___/___ *Euphydryas chalcedona* (Variable Checkerspot)
___/___ ***Euphydryas editha quino*** **(Quino Checkerspot)**
___/___ *Polygonia satyrus* (Satyr Anglewing)
___/___ *Nymphalis antiopa* (Mourning Cloak)
___/___ *Vanessa atalanta* (Red Admiral)
X/A *Vanessa cardui* (Painted Lady)
___/___ *Vanessa virginiensis* (American Lady)
___/___ *Vanessa annabella* (West Coast lady)
X/O *Junonia coenia* (Common Buckeye)
___/___ *Limenitis lorquini* (Lorquin's Admiral)
___/___ *Adelpha californica* (California Sister)
___/___ *Danaus plexippus* (Monarch)
___/___ *Danaus gilippus* (Queen)
___/___ *Ceonympha californica* (California Ringlet)
X/U *Erynnis funeralis* (Funereal Duskywing)
___/___ *Erynnis propertius* (Propertius Duskywing)
___/___ *Erynnis tristis* (Mournful Duskywing)
___/___ *Pyrgus albescens* (White Checkered Skipper)
___/___ *Heliopetes ericetorum* (Large White Skipper)
___/___ *Hylephila phyleus* (Fiery Skipper)
___/___ *Atalopedes campestris* (Sachem)
___/___ *Polites sabuleti* (Sandhill Skipper)
___/___ *Ochlodes agricola* (Rural Skipper)
___/___ *Poane melane* (Umber Skipper)

Bird Species Observed

Other Wildlife Species Observed

Quino Checkerspot Butterfly Focused Survey Field Notes Form

Project Name: Alberhill Acreage Surveyed: ~80 Biologist: David K. Faulkner Date: 16 Mar 2009 #2

Survey Start: 0930 Survey End: 1630 Area Surveyed (Portion of Site): ALL QCB Detected (Circle) (N)

Time:	0930	1200	1400	1630			
Temp. °F	68	72	76	74			
Wind Speed (Beaufort):	0	3 mph	5	7			
% Cloud Cover:	0	0	0	0			

Butterfly Species Observed / Relative Abundance: U = Uncommon (1-3) O = Occasional (4-15) C = Common (16-40) A = Abundant (Over 40)

___/___ *Papilio rutulus* (Western Tiger Swallowtail)
___/___ *Papilio zelicaon* (Anise Swallowtail)
___/___ *Papilio eurymedon* (Pale Swallowtail)
___/___ *Papilio cresphontes* (Giant Swallowtail)
___/___ *Papilio polyxenes coloro* (Desert Swallowtail)
___/___ *Pieris rapae* (Cabbage White)
X/C *Pontia protodice* (Checkered White)
___/___ *Pontia beckeri* (Becker's White)
X/U *Pontia sisymbrii* (Spring White)
___/___ *Euchloe hyantis* (Pearly Marble)
___/___ *Anthocharis lanceolata* (Gray Marble)
X/C *Anthocharis sara* (Sara Orangetip)
X/C *Anthocharis cethura* (Desert Orangetip)
X/O *Colias eurytheme* (Orange Sulphur)
___/___ *Colias harfordii* (Harford's Sulphur)
___/___ *Colias cesonia* (Southern Dogface)
___/___ *Colias eurydice* (California Dogface)
___/___ *Eurema nicippe* (Sleepy Orange)
___/___ *Nathalis iole* (Dainty Sulphur)
___/___ *Phoebus sennae* (Cloudless Sulphur)
X/U *Strymon melinus* (Gray Hairstreak)
___/___ *Atlides halesus* (Great Purple Hairstreak)
___/___ *Callophrys augustinus* (Brown Elfin)
___/___ *Callophrys perplexa* (Perplexing Hairstreak)
___/___ *Everes amyntula* (Western Tailed Blue)
___/___ *Glaucopsyche lygdamus australis* (Southern Blue)
___/___ *Leptotes marina* (Marine Blue)
___/___ *Brephidium exile* (Pygmy Blue)
___/___ *Hemiargus ceraunus gyas* (Edward's Blue)
___/___ *Hemiargus isola* (Reakirt's Blue)
___/___ *Philotes sonorensis* (Sonora Blue)
___/___ *Celastrina echo* (Echo Blue)
X/O *Plebejus acmon* (Acmon Blue)
___/___ *Plebejus icarioides* (Boisduval's Blue)
___/___ *Euphilotes bernardino* (Bernardino Blue)
___/___ *Calephelis wrightii* (Wright's Metalmark)
X/U *Apodemia virgulti* (Behr's Metalmark)
___/___ *Agraulis vanillae* (Gulf Fritillary)
___/___ *Phyciodes mylitta* (Mylitta Crescent)
___/___ *Chlosyne gabbii* (Gabb's Checkerspot)
___/___ *Chlosyne californica* (California Patch)
___/___ *Chlosyne leanira* (Wright's Checkerspot)
___/___ *Euphydryas chalcedona* (Variable Checkerspot)
___/___ ***Euphydryas editha quino* (Quino Checkerspot)**
___/___ *Polygonia satyrus* (Satyr Anglewing)
___/___ *Nymphalis antiopa* (Mourning Cloak)
___/___ *Vanessa atalanta* (Red Admiral)
X/A *Vanessa cardui* (Painted Lady)
___/___ *Vanessa virginiensis* (American Lady)
___/___ *Vanessa annabella* (West Coast lady)
X/O *Junonia coenia* (Common Buckeye)
___/___ *Limenitis lorquini* (Lorquin's Admiral)
___/___ *Adelpha californica* (California Sister)
___/___ *Danaus plexippus* (Monarch)
___/___ *Danaus gilippus* (Queen)
___/___ *Ceonympha californica* (California Ringlet)
X/U *Erynnis funeralis* (Funereal Duskywing)
___/___ *Erynnis propertius* (Propertius Duskywing)
___/___ *Erynnis tristis* (Mournful Duskywing)
___/___ *Pyrgus albescens* (White Checkered Skipper)
___/___ *Heliopetes ericetorum* (Large White Skipper)
___/___ *Hylephila phyleus* (Fiery Skipper)
___/___ *Atalopedes campestris* (Sachem)
___/___ *Polites sabuleti* (Sandhill Skipper)
___/___ *Ochlodes agricola* (Rural Skipper)
___/___ *Poane melane* (Umber Skipper)

Bird Species Observed

Other Wildlife Species Observed

Quino Checkerspot Butterfly Focused Survey Field Notes Form

Project Name: Alhambra - SCE Acreage Surveyed: ~80 Biologist: David K. Faulkner Date: 23 March 2009 #3

Survey Start: 1000 Survey End: 1630 Area Surveyed (Portion of Site): ALL QCB Detected (Circle) (N)

Time:	1000	1200	1330	1630			
Temp. °F	66°	69°	70°	70°			
Wind Speed (Beaufort):	0	1 mph	3 mph	3 mph			
% Cloud Cover:	0	0	0	0			

Butterfly Species Observed / Relative Abundance: U = Uncommon (1-3) O = Occasional (4-15) C = Common (16-40) A = Abundant (Over 40)

___/___ *Papilio rutulus* (Western Tiger Swallowtail)
___/___ *Papilio zelicaon* (Anise Swallowtail)
X/U *Papilio eurymedon* (Pale Swallowtail)
___/___ *Papilio cresphontes* (Giant Swallowtail)
___/___ *Papilio polyxenes coloro* (Desert Swallowtail)
X/U *Pieris rapae* (Cabbage White)
X/C *Pontia protodice* (Checkered White)
___/___ *Pontia beckeri* (Becker's White)
___/___ *Pontia sisymbrii* (Spring White)
___/___ *Euchloe hyantis* (Pearly Marble)
___/___ *Anthocharis lanceolata* (Gray Marble)
X/A *Anthocharis sara* (Sara Orangetip)
___/___ *Anthocharis cethura* (Desert Orangetip)
X/O *Colias eurytheme* (Orange Sulphur)
___/___ *Colias harfordii* (Harford's Sulphur)
___/___ *Colias cesonia* (Southern Dogface)
___/___ *Colias eurydice* (California Dogface)
___/___ *Eurema nicippe* (Sleepy Orange)
___/___ *Nathalis iole* (Dainty Sulphur)
___/___ *Phoebus sennae* (Cloudless Sulphur)
X/U *Strymon melinus* (Gray Hairstreak)
___/___ *Atlides halesus* (Great Purple Hairstreak)
X/O *Callophrys augustinus* (Brown Elfin)
X/C *Callophrys perplexa* (Perplexing Hairstreak)
___/___ *Everes amyntula* (Western Tailed Blue)
X/C *Glaucopsyche lygdamus australis* (Southern Blue)
___/___ *Leptotes marina* (Marine Blue)
___/___ *Brephidium exile* (Pygmy Blue)
___/___ *Hemiargus ceraunus gyas* (Edward's Blue)
___/___ *Hemiargus isola* (Reakirt's Blue)
___/___ *Philotes sonorensis* (Sonora Blue)
X/O *Celastrina echo* (Echo Blue)
X/O *Plebejus acmon* (Acmon Blue)
___/___ *Plebejus icarioides* (Boisduval's Blue)
___/___ *Euphilotes bernardino* (Bernardino Blue)
___/___ *Calephelis wrightii* (Wright's Metalmark)
X/C *Apodemia virgulti* (Behr's Metalmark)
___/___ *Agraulis vanillae* (Gulf Fritillary)
___/___ *Phyciodes mylitta* (Mylitta Crescent)
X/U *Chlosyne gabbii* (Gabb's Checkerspot)
___/___ *Chlosyne californica* (California Patch)
___/___ *Chlosyne leanira* (Wright's Checkerspot)
___/___ *Euphydryas chalcedona* (Variable Checkerspot)
___/___ ***Euphydryas editha quino* (Quino Checkerspot)**
___/___ *Polygonia satyrus* (Satyr Anglewing)
___/___ *Nymphalis antiopa* (Mourning Cloak)
___/___ *Vanessa atalanta* (Red Admiral)
X/A *Vanessa cardui* (Painted Lady)
___/___ *Vanessa virginiensis* (American Lady)
X/O *Vanessa annabella* (West Coast lady)
X/O *Junonia coenia* (Common Buckeye)
___/___ *Limenitis lorquini* (Lorquin's Admiral)
___/___ *Adelpha californica* (California Sister)
___/___ *Danaus plexippus* (Monarch)
___/___ *Danaus gilippus* (Queen)
___/___ *Ceonympha californica* (California Ringlet)
X/O *Erynnis funeralis* (Funereal Duskywing)
X/U *Erynnis propertius* (Propertius Duskywing)
___/___ *Erynnis tristis* (Mournful Duskywing)
___/___ *Pyrgus albescens* (White Checkered Skipper)
___/___ *Heliopetes ericetorum* (Large White Skipper)
X/U *Hylephila phyleus* (Fiery Skipper)
___/___ *Atalopedes campestris* (Sachem)
___/___ *Polites sabuleti* (Sandhill Skipper)
___/___ *Ochlodes agricola* (Rural Skipper)
___/___ *Poane melane* (Umber Skipper)

Bird Species Observed

Other Wildlife Species Observed
Albino ground squirrel

F-137

Quino Checkerspot Butterfly Focused Survey Field Notes Form

Project Name: ALBERHILL Acreage Surveyed: ~80 Biologist: DAVID K. FAULKNER Date: 29 March 2009

Survey Start: 0900 Survey End: 1500 Area Surveyed (Portion of Site): ALL QCB Detected (Circle) (N)

Time:	0900	1200	1300	1500			
Temp. °F	65°	69°	75°	74°			
Wind Speed (Beaufort):	4-5	5	4	8-9			
% Cloud Cover:	Ø	Ø	Ø	Ø			

Butterfly Species Observed / Relative Abundance: U = Uncommon (1-3) O = Occasional (4-15) C = Common (16-40) A = Abundant (Over 40)

___/___ *Papilio rutulus* (Western Tiger Swallowtail)
x/U *Papilio zelicaon* (Anise Swallowtail)
x/U *Papilio eurymedon* (Pale Swallowtail)
___/___ *Papilio cresphontes* (Giant Swallowtail)
___/___ *Papilio polyxenes coloro* (Desert Swallowtail)
x/O *Pieris rapae* (Cabbage White)
x/C *Pontia protodice* (Checkered White)
___/___ *Pontia beckeri* (Becker's White)
___/___ *Pontia sisymbrii* (Spring White)
___/___ *Euchloe hyantis* (Pearly Marble)
___/___ *Anthocharis lanceolata* (Gray Marble)
x/C *Anthocharis sara* (Sara Orangetip)
___/___ *Anthocharis cethura* (Desert Orangetip)
x/O *Colias eurytheme* (Orange Sulphur)
x/U *Colias harfordii* (Harford's Sulphur)
___/___ *Colias cesonia* (Southern Dogface)
___/___ *Colias eurydice* (California Dogface)
___/___ *Eurema nicippe* (Sleepy Orange)
___/___ *Nathalis iole* (Dainty Sulphur)
___/___ *Phoebus sennae* (Cloudless Sulphur)
x/U *Strymon melinus* (Gray Hairstreak)
___/___ *Atlides halesus* (Great Purple Hairstreak)
x/O *Callophrys augustinus* (Brown Elfin)
x/C *Callophrys perplexa* (Perplexing Hairstreak)
___/___ *Everes amyntula* (Western Tailed Blue)
x/C *Glaucopsyche lygdamus australis* (Southern Blue)
___/___ *Leptotes marina* (Marine Blue)
x/U *Brephidium exile* (Pygmy Blue)
___/___ *Hemiargus ceraunus gyas* (Edward's Blue)
___/___ *Hemiargus isola* (Reakirt's Blue)
___/___ *Philotes sonorensis* (Sonora Blue)
___/___ *Celastrina echo* (Echo Blue)
x/C *Plebejus acmon* (Acmon Blue)
___/___ *Plebejus icarioides* (Boisduval's Blue)
___/___ *Euphilotes bernardino* (Bernardino Blue)
___/___ *Calephelis wrightii* (Wright's Metalmark)
x/C *Apodemia virgulti* (Behr's Metalmark)
___/___ *Agraulis vanillae* (Gulf Fritillary)
___/___ *Phyciodes mylitta* (Mylitta Crescent)
x/U *Chlosyne gabbii* (Gabb's Checkerspot)
___/___ *Chlosyne californica* (California Patch)
___/___ *Chlosyne leanira* (Wright's Checkerspot)
___/___ *Euphydryas chalcedona* (Variable Checkerspot)
___/___ ***Euphydryas editha quino*** **(Quino Checkerspot)**
___/___ *Polygonia satyrus* (Satyr Anglewing)
___/___ *Nymphalis antiopa* (Mourning Cloak)
___/___ *Vanessa atalanta* (Red Admiral)
x/A *Vanessa cardui* (Painted Lady)
___/___ *Vanessa virginiensis* (American Lady)
x/O *Vanessa annabella* (West Coast lady)
x/C *Junonia coenia* (Common Buckeye)
___/___ *Limenitis lorquini* (Lorquin's Admiral)
___/___ *Adelpha californica* (California Sister)
___/___ *Danaus plexippus* (Monarch)
___/___ *Danaus gilippus* (Queen)
___/___ *Ceonympha californica* (California Ringlet)
x/O *Erynnis funeralis* (Funereal Duskywing)
x/U *Erynnis propertius* (Propertius Duskywing)
___/___ *Erynnis tristis* (Mournful Duskywing)
___/___ *Pyrgus albescens* (White Checkered Skipper)
___/___ *Heliopetes ericetorum* (Large White Skipper)
x/O *Hylephila phyleus* (Fiery Skipper)
x/U *Atalopedes campestris* (Sachem)
___/___ *Polites sabuleti* (Sandhill Skipper)
___/___ *Ochlodes agricola* (Rural Skipper)
___/___ *Poane melane* (Umber Skipper)

Bird Species Observed

Other Wildlife Species Observed

Quino Checkerspot Butterfly Focused Survey Field Notes Form

Project Name: ALBERHILL - SCE Project Acreage Surveyed: ~80 Biologist: David K. Faulkner Date: 5 APRIL 2009
(Final Survey)

Survey Start: 0900 Survey End: 1500 Area Surveyed (Portion of Site): ALL QCB Detected (Circle) (N)

Time:	0900	1200	1500				
Temp. °F	72°	81°	81°				
Wind Speed (Beaufort):	5mph	1mph	2-3mph				
% Cloud Cover:	ø	ø	ø				

Butterfly Species Observed / Relative Abundance: U = Uncommon (1-3) O = Occasional (4-15) C = Common (16-40) A = Abundant (Over 40)

___/___ *Papilio rutulus* (Western Tiger Swallowtail)
___/___ *Papilio zelicaon* (Anise Swallowtail)
___/___ *Papilio eurymedon* (Pale Swallowtail)
___/___ *Papilio cresphontes* (Giant Swallowtail)
___/___ *Papilio polyxenes coloro* (Desert Swallowtail)
___/___ *Pieris rapae* (Cabbage White)
X/A *Pontia protodice* (Checkered White)
___/___ *Pontia beckeri* (Becker's White)
___/___ *Pontia sisymbrii* (Spring White)
___/___ *Euchloe hyantis* (Pearly Marble)
___/___ *Anthocharis lanceolata* (Gray Marble)
X/A *Anthocharis sara* (Sara Orangetip)
___/___ *Anthocharis cethura* (Desert Orangetip)
X/U *Colias eurytheme* (Orange Sulphur)
___/___ *Colias harfordii* (Harford's Sulphur)
___/___ *Colias cesonia* (Southern Dogface)
___/___ *Colias eurydice* (California Dogface)
___/___ *Eurema nicippe* (Sleepy Orange)
___/___ *Nathalis iole* (Dainty Sulphur)
___/___ *Phoebus sennae* (Cloudless Sulphur)
X/U *Strymon melinus* (Gray Hairstreak)
___/___ *Atlides halesus* (Great Purple Hairstreak)
___/___ *Callophrys augustinus* (Brown Elfin)
___/___ *Callophrys perplexa* (Perplexing Hairstreak)
___/___ *Everes amyntula* (Western Tailed Blue)
___/___ *Glaucopsyche lygdamus australis* (Southern Blue)
___/___ *Leptotes marina* (Marine Blue)
___/___ *Brephidium exile* (Pygmy Blue)
___/___ *Hemiargus ceraunus gyas* (Edward's Blue)
___/___ *Hemiargus isola* (Reakirt's Blue)
___/___ *Philotes sonorensis* (Sonora Blue)
___/___ *Celastrina echo* (Echo Blue)
___/___ *Plebejus acmon* (Acmon Blue)
___/___ *Plebejus icarioides* (Boisduval's Blue)
___/___ *Euphilotes bernardino* (Bernardino Blue)
___/___ *Calephelis wrightii* (Wright's Metalmark)
X/A *Apodemia virgulti* (Behr's Metalmark)
___/___ *Agraulis vanillae* (Gulf Fritillary)
___/___ *Phyciodes mylitta* (Mylitta Crescent)
___/___ *Chlosyne gabbii* (Gabb's Checkerspot)
___/___ *Chlosyne californica* (California Patch)
___/___ *Chlosyne leanira* (Wright's Checkerspot)
___/___ *Euphydryas chalcedona* (Variable Checkerspot)
___/___ ***Euphydryas editha quino* (Quino Checkerspot)**
___/___ *Polygonia satyrus* (Satyr Anglewing)
___/___ *Nymphalis antiopa* (Mourning Cloak)
___/___ *Vanessa atalanta* (Red Admiral)
X/U *Vanessa cardui* (Painted Lady)
___/___ *Vanessa virginiensis* (American Lady)
___/___ *Vanessa annabella* (West Coast lady)
X/A *Junonia coenia* (Common Buckeye)
___/___ *Limenitis lorquini* (Lorquin's Admiral)
___/___ *Adelpha californica* (California Sister)
___/___ *Danaus plexippus* (Monarch)
___/___ *Danaus gilippus* (Queen)
___/___ *Ceonympha californica* (California Ringlet)
X/O *Erynnis funeralis* (Funereal Duskywing)
___/___ *Erynnis propertius* (Propertius Duskywing)
___/___ *Erynnis tristis* (Mournful Duskywing)
X/O *Pyrgus albescens* (White Checkered Skipper)
___/___ *Heliopetes ericetorum* (Large White Skipper)
X/O *Hylephila phyleus* (Fiery Skipper)
___/___ *Atalopedes campestris* (Sachem)
___/___ *Polites sabuleti* (Sandhill Skipper)
___/___ *Ochlodes agricola* (Rural Skipper)
___/___ *Poane melane* (Umber Skipper)

Numerous day-flying moths, white-lined sphinx

Bird Species Observed

PLANTAGO dry/owl's clover dry closed in grasses on slopes.

Other ~~Wildlife~~ Species Observed

Flowering: Eriastrum, deerweed, Eriodictyon, blue dicks, buckwheat, Thermopsis, Amsinckia, Phacelia, Cryptantha, Goldfields

Quino Checkerspot Butterfly Focused Survey Field Notes Form

Project Name: Alberhill Acreage Surveyed: ~80 acres Biologist: David K. Faulkner Date: 11 APRIL 2009 [LAST VISIT 4C]

Survey Start: 0900 Survey End: 1600 Area Surveyed (Portion of Site): ALL QCB Detected (Circle) (N)

Time:	0900	1300	1600				
Temp. °F	65°	69°	69°				
Wind Speed (Beaufort):	2	2-3	2-3				
% Cloud Cover:	ø	ø	ø				

Butterfly Species Observed / Relative Abundance: U = Uncommon (1-3) O = Occasional (4-15) C = Common (16-40) A = Abundant (Over 40)

___/___ *Papilio rutulus* (Western Tiger Swallowtail)
x/U *Papilio zelicaon* (Anise Swallowtail)
___/___ *Papilio eurymedon* (Pale Swallowtail)
___/___ *Papilio cresphontes* (Giant Swallowtail)
___/___ *Papilio polyxenes coloro* (Desert Swallowtail)
x/O *Pieris rapae* (Cabbage White)
x/U *Pontia protodice* (Checkered White)
___/___ *Pontia beckeri* (Becker's White)
___/___ *Pontia sisymbrii* (Spring White)
___/___ *Euchloe hyantis* (Pearly Marble)
___/___ *Anthocharis lanceolata* (Gray Marble)
___/___ *Anthocharis sara* (Sara Orangetip)
___/___ *Anthocharis cethura* (Desert Orangetip)
x/U *Colias eurytheme* (Orange Sulphur)
___/___ *Colias harfordii* (Harford's Sulphur)
___/___ *Colias cesonia* (Southern Dogface)
___/___ *Colias eurydice* (California Dogface)
___/___ *Eurema nicippe* (Sleepy Orange)
x/U *Nathalis iole* (Dainty Sulphur)
___/___ *Phoebus sennae* (Cloudless Sulphur)
___/___ *Strymon melinus* (Gray Hairstreak)
___/___ *Atlides halesus* (Great Purple Hairstreak)
___/___ *Callophrys augustinus* (Brown Elfin)
___/___ *Callophrys perplexa* (Perplexing Hairstreak)
___/___ *Everes amyntula* (Western Tailed Blue)
___/___ *Glaucopsyche lygdamus australis* (Southern Blue)
x/U *Leptotes marina* (Marine Blue)
x/U *Brephidium exile* (Pygmy Blue)
___/___ *Hemiargus ceraunus gyas* (Edward's Blue)
___/___ *Hemiargus isola* (Reakirt's Blue)
___/___ *Philotes sonorensis* (Sonora Blue)
___/___ *Celastrina echo* (Echo Blue)
x/C *Plebejus acmon* (Acmon Blue)
___/___ *Plebejus icarioides* (Boisduval's Blue)
___/___ *Euphilotes bernardino* (Bernardino Blue)
___/___ *Calephelis wrightii* (Wright's Metalmark)
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___/___ *Agraulis vanillae* (Gulf Fritillary)
___/___ *Phyciodes mylitta* (Mylitta Crescent)
___/___ *Chlosyne gabbii* (Gabb's Checkerspot)
___/___ *Chlosyne californica* (California Patch)
___/___ *Chlosyne leanira* (Wright's Checkerspot)
___/___ *Euphydryas chalcedona* (Variable Checkerspot)
___/___ ***Euphydryas editha quino* (Quino Checkerspot)**
___/___ *Polygonia satyrus* (Satyr Anglewing)
___/___ *Nymphalis antiopa* (Mourning Cloak)
___/___ *Vanessa atalanta* (Red Admiral)
___/___ *Vanessa cardui* (Painted Lady)
x/U *Vanessa virginiensis* (American Lady)
___/___ *Vanessa annabella* (West Coast lady)
___/___ *Junonia coenia* (Common Buckeye)
___/___ *Limenitis lorquini* (Lorquin's Admiral)
___/___ *Adelpha californica* (California Sister)
___/___ *Danaus plexippus* (Monarch)
___/___ *Danaus gilippus* (Queen)
___/___ *Ceonympha californica* (California Ringlet)
x/O *Erynnis funeralis* (Funereal Duskywing)
___/___ *Erynnis propertius* (Propertius Duskywing)
___/___ *Erynnis tristis* (Mournful Duskywing)
___/___ *Pyrgus albescens* (White Checkered Skipper)
___/___ *Heliopetes ericetorum* (Large White Skipper)
x/U *Hylephila phyleus* (Fiery Skipper)
___/___ *Atalopedes campestris* (Sachem)
___/___ *Polites sabuleti* (Sandhill Skipper)
___/___ *Ochlodes agricola* (Rural Skipper)
___/___ *Poane melane* (Umber Skipper)

Grass dry; Plantago dry

Bird Species Observed

Other Wildlife Species Observed
Albino ground squirrel (again)

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SJM BIOLOGICAL CONSULTANTS

26 July 2009 SJMBC.779

Matthew Malle
AECOM/Earth Tech
1461 East Cooley Drive
Suite 100
Colton, CA 92324
(909) 554-5000

SUBJECT: Results of a habitat assessment for the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) at the 521-acre Alberhill study site, (Riverside County, California) for the purpose of evaluating proposed alternatives for a Southern California Edison 500kV substation and associated transmission lines (Figures 1 and 2).

Dear Mr. Malle:

At the request of AECOM, a focused habitat assessment for the federally endangered Stephens' Kangaroo rat (*Dipodomys stephensi*) (**SKR**) was conducted at the site described above, between 27 June and 6 July and on 30 July 2009. The objective of the assessment was to determine the potential for SKR in the project area, and to identify areas requiring subsequent live-trapping to confirm the identity of resident kangaroo rats.

INTRODUCTION AND SITE DESCRIPTION

The Alberhill project site lies immediately north of Interstate 15, to the north and northwest of Lake Street in Riverside County, California (Figure 1). NAD 83 UTM coordinates near the center of the proposed substation are 11 6461860E/3732899N, and near the center of the proposed potential transmission line alignments are 11 0463259E/3733529N. The property occurs in Sections 9, 10, 15 and 16, Range 5 West, Township 5 South, on the Alberhill USGS 7.5' Quadrangle, in Riverside County, California.

The proposed project involves the construction of a substation in the lower (southwesterly) portion of the site, and the erection of a transmission line to and from the substation, connecting with the existing transmission line in the hills to the east/northeast.

The Stephens' kangaroo rat is known to occur widely in Riverside County, in a few localities in southwestern San Bernardino County, and at several localities in San Diego County (Lackey 1967; Montgomery 1991; Montgomery et al. 1996/1997; O'Farrell and Uptain 1989; O'Farrell et al. 1987, 1986; Ogden 1998; SJM Biological Consultants 2003; Thomas 1975, 1973; USFWS 1997). Stephens' kangaroo rats are known from the vicinity of the project site (see below), which necessitated a determination of SKR presence/absence on the property.

General natural history features and habitat requirements of SKR are fairly well known (O'Farrell 1987, 1990). Habitats occupied by SKR characteristically occur on level to gently sloping terrain, although the species has occasionally been found on relatively steep slopes (e.g. Montgomery 1990; M.J. O'Farrell, pers. comm.). Soils in habitats harboring SKR are typically loamy in nature, while soils dominated by clay or sand very rarely contain this species (Price and Endo 1989; S.J. Montgomery, pers. observ.; M.J. O'Farrell 1987; O'Farrell and Uptain 1989).

Stephens' kangaroo rats typically occupy lands described as disturbed annual grassland and characterized by a relatively sparse cover of both shrubs and herbaceous vegetation. Although resident SKR have occasionally been found in relatively dense stands of sage scrub in Riverside County (S.J. Montgomery, pers. observ.), such occurrences are by far the exception to the rule. Occupied habitats commonly exhibit an abundance of bare soil during much of the year. Nonetheless, spring/early-summer flushes of forb (e.g. *Erodium sp.*) growth often temporarily reduce the amount of visible exposed ground. This phase of the yearly cycle of vegetation growth is subsequently transformed by the desiccating forces of the summer season, which cause non-grass herbaceous vegetation (i.e. forbs) to dry up and disarticulate, again revealing the bare ground that is so characteristic of occupied SKR habitat. Reflecting this preference for open ground, a high ratio of forbs to grasses increases the suitability of a grassland for SKR.

Stephens' kangaroo rats are capable of occupying small patches of favorable habitat amidst otherwise unsuitable (e.g. dense grassy) habitats. They also readily use narrow strips of open habitat to move between larger blocks of suitable habitat (S. Montgomery, pers. observ; O'Farrell 1990; Price and Kelly 1992).

The project area encompasses two primary topographic areas: (a) the southerly level to gently sloping lands just northward of I15, and (b) the steeper lands eastward of area (a). The southwestern portion of the project site is primarily level to gently sloping terrain along the Temescal Creek floodplain.. This area is heavily developed and contains a horse ranch, corrals, pastures, stables and a training track. Although topography and general soil conditions in this area are superficially suitable for SKR, development has eliminated the possibility for SKR populations over most of the area. Some other lands in the southern portion of the site exhibit steeper topography or exhibit a variety of human disturbances and structures; however, they still contain patches of level to gently sloping terrain generally suitable for SKR, primarily in some canyon bottoms, on saddles and ridgelines, and in less disturbed shallow slopes.

A majority of the remainder of the site encompasses the steeply sloping rugged hills to the north, which are covered in disturbed annual grassland and sparse sage scrub vegetation. Elevations range from approximately 350 meters in the southwestern part of the site to approximately 650 meters at high points in the northeastern portion of the property.

As mentioned, portions of the site have experienced a variety of substrate disturbances and developments, including discing, cultivation, farming, rural housing and development of stables and pastures, fencing, concrete foundations, small buildings, bulldozing, ORV use and dumping. Dirt access roads are common throughout much of the project area. In addition, the northerly portion of the study area falls within lands managed by the Riverside County Habitat Conservation Authority (RCHCA) (Figure 2).

Soils on the site vary widely in their suitability for SKR. Most are generally unsuitable, consisting of course rocks and clays in the higher elevations and on slopes. Some of the lower lying areas, saddles and gentle slopes exhibit better-drained friable soils with higher percentages of loam more suitable for SKR.

Much of the site is covered by sparse to moderately dense non-native grasses and both native and non-native forbs. Common forbs include mustard (*Hirschfeldia incana),* fiddleneck (*Amsinckia menziesii*), filaree (*Erodium botrys*), tarweed (*Hemizonia sp*), distant phacelia (*Phacelia distans*), London rocket (*Sisymbrium irio),* slender sunflower (*Helianthus gracilentus*) and deer weed (*Lotus scoparius).* Common grasses present throughout the site include: wild oats (*Avena sp*.), cheatgrass (*Bromus tectorum*), ripgut (*Bromus diandrus*), and red brome (*Bromus madritensis rubens),* barley *(Hordeum murinum),* golden top *(Lamarkia auria),* and fescue *(Vulpia sp).* Stands of Riversidean sage scrub vegetation also are present at scattered locations across the site. Common constituents of this community include brittlebush (*Encelia farinosa*), white sage (*Salvia apiana*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and at scattered locations tree-shrubs such as Mexican elderberry (*Sambucus mexicana*) and laurel sumac (*Malosma laurina*). Stands of mule-fat (*Baccharis salicifolia*) occur in certain drainages, and invasive species such as Russian thistle (*Salsola sp.)* and tamarisk (*Tamarix ramosissima)* also occur in scattered localities across the site.

METHODS AND NEARBY RECORDS OF SKR

U.S. Fish and Wildlife and CNDDB data-bases covering the project area were reviewed to determine any prior suspected or known SKR occurrences in the area. Although a few CNDDB SKR records were found in the near vicinity of the project area, these were of limited usefulness, as they were vaguely described and outdated. Most were over 20 years old, and were labeled as "presumed SKR," probably based primarily on old aerial photographs or topographic maps and known SKR populations in the general area. Only one 20-year-old record was actually backed up by trapping to confirm SKR (at 600m elevation on a BLM parcel), and even this record had a 0.60 mile radius of inaccuracy (CNDDB record #107 - 1989 O'Farrell).

Personal trapping records for SKR conducted over the past 20 years also were reviewed. O'Farrell and Uptain (1989) mapped SKR at several locations to the north in close proximity to the northern extremity of the current project area. However, these mapped locations occurred on level to gently sloping ridgelines at higher elevations to the north in the Estelle Mountain area. These broader more level areas are generally more suitable for SKR than the steeper, narrow ridgeline sites in the easterly and northerly parts of the current project area.

Montgomery (1989a, 1989b) reported populations of SKR approximately 2.2 miles to the northwest and approximately 1.5 miles to the southeast of the project site, respectively. In addition, the non-endangered Dulzura kangaroo rat was confirmed just south of the southeastern part of the current project site (Montgomery 1989b).

An initial site reconnaissance survey at the project site was conducted by U.S. Fish and Wildlife Service permit holder (TE745541-10) Stephen J. Montgomery and Dan Grout (a sub-permittee to Montgomery) on 27 June 2009; Matthew Malle of AECOM also was present during this field visit, to show the study area boundaries and access routes, as well as to discuss safety issues. Subsequent SKR habitat assessment walking and mapping surveys from 28 June – 6 July were conducted by Daniel Grout, and on 30 July by Montgomery.

All parts of the property within the substation footprint, along potential transmission alignments and associated buffers, and at potential tower sites – in areas exhibiting general topography and habitat conditions suitable for SKR (see habitat preferences above) - were visited on foot and searched for such diagnostic kangaroo rat sign as burrows, scat (fecal pellets) and tracks. A Garmin GPS was used to find proposed tower locations, and to mark locations with suspected or definite kangaroo rat burrows.

All locations within the study area were classified(for mapping purposes) into one of the following three categories, based on topography, soils, disturbances, vegetation, and presence of definite kangaroo rat sign or possible kangaroo rat sign:

- **Unsuitable Habitat and Unoccupied by kangaroo rats**

- **P = Potential for SKR (definite or possible sign of kangaroo rats observed, and SKR potential low to moderate, with Dulzura kangaroo rats (DKR) also possible). Also, in some locations, although definite diagnostic sign was not observed, there were subtle indications of the potential for kangaroo rats. Trapping is required to confirm the identity of the resident species in "P" areas.**

- **L = Likely SKR, due to the pattern of active kangaroo rat burrows and abundance and habitat association (trapping needed to confirm SKR)**

Only Potential (P) and Likely (L) habitat areas for SKR were illustrated on the project maps. Remaining unmapped lands are those considered generally unsuitable for SKR.

RESULTS

Typical weather conditions during the survey period included clear skies, warm to hot air temperatures (90-100 F) and wind speeds of 10-25 mph.

Visual inspections during the walking surveys confirmed that a large part of the site consist of steep slopes with rocky or clayish soils, which are for the most part unsuitable for and not occupied by SKR. However, scattered locations in level to gently sloping terrain exhibit loamy soils generally suitable for SKR, and these areas were necessarily searched for kangaroo rat sign and, where appropriate, mapped as potential habitat for this species.

One limited area exhibited active burrows, scat and a habitat association characteristic of SKR, and this area is considered likely (L) to harbor SKR. This area lies just south of Tower C4-1 in the southeastern corner of the substation parcel (Figure 2). Future trapping in this area may confirm the presence of a small remnant population of SKR. The recent discing that occurred immediately south and east of this area would likely have eliminated any SKR populations that might have historically occurred in these areas.

A number of additional areas with relatively gentle slopes and more suitable soils, most of which exhibited definite kangaroo rat sign, were mapped as Potentially (P) occupied by SKR. However, the burrows, scat and habitat associations in most of these mapped Potential areas are in fact more consistent with those typically associated with the non-endangered Dulzura kangaroo rat (DKR). Nonetheless, a few SKR also could occur at some of these locations. As mentioned, All mapped Potential habitat areas would require trapping to confirm presence/absence of SKR.

Several areas exhibiting definite or possible kangaroo rat sign (P areas on the maps), and therefore feasibly occupied by low numbers of SKR, occur within the northerly lands that are managed by the Riverside County MSHCP. Nonetheless, although SKR have been confirmed in higher elevational lands to the east of the project area (e.g. see O'Farrell and Uptain 1989), the topography and habitat conditions in these northern parts of the current project area are clearly sub-optimal for SKR, as suggested above.

DISCUSSION

The field effort revealed that SKR may in fact occur in the project area but are likely limited to a very small and localized distribution in a few discrete zones. Specifically, trapping in area L may confirm a small population of SKR.

Trapping surveys will be required to confirm SKR presence/absence in mapped Potential (P) habitat blocks (Figure 2). In some of these mapped P areas where diagnostic kangaroo rat sign was not confirmed, intensive ground searches for kangaroo rat sign would be recommended at that time. It is expected that two 5-night trapping sessions will be required to complete SKR presence/absence surveys, due to the number and relative inaccessibility of many of these sites.

The overall quality of habitats in the project area for SKR is low. In general, most of the area exhibits terrain too steep and/or too disturbed for substantial populations of this species to occur. In addition, soils in much of this area are sub-optimal for this species. Also, the apparent absence of SKR populations in the immediate vicinity greatly reduces or eliminates the potential for passive colonization of any small patches of suitable habitat that do occur within the study area.

Although the most southerly lands in the project area are generally level or gently sloping, and exhibit soils generally suitable for SKR, this area has been heavily disturbed and SKR are not present. The species would not be expected to occur in this area in the future due to historic and on-going disturbance, as well as the apparent absence of nearby sources of individuals to colonize the project site.

It is recommended that any project related activities proposed for locations confirmed as occupied by SKR be relocated so as to avoid incidental take of this species. However, since populations of this species are undoubtedly very limited in area and distribution, such project relocations would be expected to be limited and minor in scope.

Due to the potential for substrate disturbances in the area of project activities and construction features, it is recommended that any identified SKR habitat be avoided by vehicles (including driving and parking) and structures by a distance of approximately 50 feet. Such areas to be avoided should be clearly marked in the field by a qualified SKR biologist. Such marked areas should be maintained throughout the project construction period, and all project personnel should be educated in formal meetings to the requirements and methods of SKR habitat avoidance throughout the project period. Prior to the commencement of construction related activities each morning, a biologist should check for SKR around parked vehicles in the area around occupied habitat, and any observed SKR should be moved away from such vehicles. If any open trenches or other steep walled excavations are present overnight in the vicinity of occupied SKR habitat, such low areas should be checked for SKR and any SKR should be removed and released in nearby suitable habitat areas with extant burrows usable by this species.

If avoidance of mapped SKR habitat is not feasible during the project, an appropriate exclusion fence can be constructed around occupied habitat, after which resident SKR may be trapped and relocated to nearby habitat areas that are deemed suitable for this species and not proposed for any type of project related disturbances. If this approach is followed, the relocation area should be surrounded by appropriate fencing prior to the relocation effort, and artificial burrows should be installed inside the fenced relocation area by a biologist familiar with this method of habitat improvement, thereby providing an immediate source of shelter for relocated animals.

Prior to any SKR habitat disturbance, full details of the fencing and methods of SKR removal/relocation would be provided by a permitted SKR biologist fully familiar with the proposed avoidance/minimization actions.

Please contact me if you have any questions regarding this report or the associated field effort.

Sincerely,



Stephen J. Montgomery

SJM Biological Consultants,Inc.

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SJM BIOLOGICAL CONSULTANTS

11 January 2010 SJMBC.797

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(909) 554-5000

SUBJECT: Results of a trapping study to confirm presence/absence of the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) at the 521-acre SCE Alberhill study site, (Riverside County, California) for the purpose of evaluating proposed alternatives for a Southern California Edison 500kV substation and associated transmission lines (Figure 1).

Dear Mr. Malle:

At the request of AECOM, a trapping survey of the federally endangered Stephens' Kangaroo rat (*Dipodomys stephensi*) (**SKR**) was conducted at the site described above from 12-17 November 2009. The objective of the assessment was to confirm the identity of kangaroo rats inhabiting previously identified sites with kangaroo rat sign. This trapping survey was a follow-up to an initial SKR habitat assessment conducted by Stephen J. Montgomery and Daniel Grout, which recommended that trapping be conducted in certain areas to confirm the distribution of occupied SKR habitat on the site.

INTRODUCTION AND SITE DESCRIPTION

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As mentioned, portions of the site have experienced a variety of substrate disturbances and developments, including discing, cultivation, farming, rural housing and development of stables and pastures, fencing, concrete foundations, small buildings, bulldozing, ORV use and dumping. Dirt access roads are common throughout much of the project area. In addition, the northerly portion of the study area falls within lands managed by the Riverside County Habitat Conservation Authority (RCHCA) (Figures 2 and 3).

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The previous Jun-July walking survey revealed one small area that was likely to have SKR, and 16 other areas that had some low to moderate potential for SKR occupation (Figure 2). The kangaroo rat signs in most of the potential areas were more consistent with those of the Dulzura kangaroo rat (**DKR**- *Dipodomys simulans*). While most of the sites were considered likely occupied primarily by DKR, the possible presence of SKR could not be definitively ruled out at that time without a trapping survey.

METHODS

On the afternoon of 12 November 2009, the mapped locations on the site from the previous July habitat survey were walked and inspected for specific locations exhibiting active kangaroo rat sign. Those areas with kangaroo rat sign or activity (scat, tracks, burrows, dust-bowls, etc.) were selected for trapping. A few small areas previously mapped as having some potential as habitat

exhibited were re-inspected to confirm presence/absence of sign, and were found to lack any diagnostic indicators of kangaroo rat activity; thus, they were not trapped during this trapping survey.

On the evening of November 12th, a total of 225 traps were set out at 11 different trap lines (Figure 2). Only one site (trap line #5) was considered likely to have SKR, while the resident species at the other ten sites was expected to be the DKR. Extra-large modified Sherman live-traps were set out at sunset and baited with a millet dominated bird-seed mixture. Traps were first checked at midnight, and then again at dawn at which time they were closed. Traps were set out for five consecutive nights from 12-17 November 2009. All trapped animals were released unharmed after being identified. Traps were checked for the last time and picked up on the morning of 17 November, with a total of 1125 trap-nights accrued during the entire trapping effort. Trapping was conducted by Daniel Grout (a sub-permittee to Stephen J. Montgomery TE745541-10 and CDFG MOU).

One location just northeast of a clay brick plant in the far southeast corner of Figure 2, which due to a lack of access during the previous habitat assessment was not identified as having a potential for SKR, was tapped during the trapping survey (see Trap Line 9). This area was trapped as a precaution, to insure that all areas with any potential for this species were fully analyzed for SKR presence/absence.

RESULTS

Weather conditions during the trapping period were mild, usually consisting of the following conditions: clear, sunny and warm during the day (75-85 F) with light breezes of 10-15 mph, and with nightly lows of ~ 60F and low wind speeds.

Trapping confirmed SKR at one small isolated area generally defined by trap line #5 (Table 1, Figure 2). Three unique SKR were captured a total of six times at this location. This small area of occupied SKR habitat very likely represents a remnant population of this species from a population that was previously more expansive, prior to the introduction of a variety of disturbances (e.g. discing, highway/road, residential and commercial development, cultivation impacts). Several DKR also were trapped in this area, which is dominated by sparse brittlebush (*Encelia farinosa*) and sparse non-native grasses.

The Dulzura kangaroo rat was the only kangaroo rat species trapped at the other ten trap sites (Table 1); a total of 98 DKR were captured during the entire trapping effort. Also recorded during the trapping survey were 141 deer mice (*Peromyscus maniculatus*), 142 San Diego pocket mice (*Chaetodipus fallax fallax*), and 3 desert woodrats (*Neotoma bryanti*).

DISCUSSION

The trapping results were as expected. SKR were only caught in very open habitat with minimal shrub and herb cover, in level to gently sloped terrain. The overall quality of habitats in the

project area for SKR is low. In general, most of the area exhibits terrain too steep and rocky and/or too disturbed for substantial populations of this species to occur. In addition, soils in much of this area are sub-optimal for this species. Also, the apparent absence of SKR populations in the immediate vicinity greatly reduces or eliminates the potential for passive colonization of any small patches of suitable habitat that do occur within the study area. Although the most southerly lands in the project area are generally level or gently sloping, and exhibit soils generally suitable for SKR, this area has been heavily disturbed and SKR are not present. The species would not be expected to occur in this area in the future due to historic and on-going disturbance, as well as the apparent absence of nearby sources of individuals to colonize the project site.

It is recommended that any project related activities proposed for locations confirmed as occupied by SKR be relocated so as to avoid incidental take of this species. However, since populations of this species are undoubtedly very limited in area and distribution, such project relocations would be expected to be limited and minor in scope.

Due to the potential for substrate disturbances in the area of project activities and construction features, it is recommended that any SKR habitat be avoided by vehicles (including driving and parking) and structures by a distance of approximately 50 feet. Such areas to be avoided should be clearly marked in the field by a qualified SKR biologist. Such marked areas should be maintained throughout the project construction period, and all project personnel should be educated in formal meetings to the requirements and methods of SKR habitat avoidance throughout the project period. Prior to the commencement of construction related activities each morning, a biologist should check for SKR around parked vehicles in the area around occupied habitat, and any observed SKR should be moved away from such vehicles. If any open trenches or other steep walled excavations are present overnight in the vicinity of occupied SKR habitat, such low areas should be checked for SKR and any SKR should be removed and released in nearby suitable habitat areas with extant burrows usable by this species.

If avoidance of mapped SKR habitat is not feasible during the project, an appropriate exclusion fence can be constructed around occupied habitat, after which resident SKR may be trapped and relocated to nearby habitat areas that are deemed suitable for this species and not proposed for any type of project related disturbances. If this approach is followed, the relocation area should be surrounded by appropriate fencing prior to the relocation effort, and artificial burrows should be installed inside the fenced relocation area by a biologist familiar with this method of habitat improvement, thereby providing an immediate source of shelter for relocated animals. A minimum of two burrows per individual, placed approximately 24 inches apart at each pre-determined burrow site, should be installed in the same relative locations at the relocation site as occupied burrows are located at the home site. Artificial burrows should be installed by an SKR biologist with experience with such work, and burrows should be placed at an angle of no greater than 30 degrees (from the horizontal) to a depth of no less than 42 inches.

Prior to any SKR habitat disturbance, full details of the fencing and methods of SKR removal/relocation would be provided by a permitted SKR biologist fully familiar with the proposed avoidance/minimization actions.

Please contact me if you have any questions regarding this report or the associated field effort.

Sincerely,



Stephen J. Montgomery

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Flagstaff, Arizona 86004
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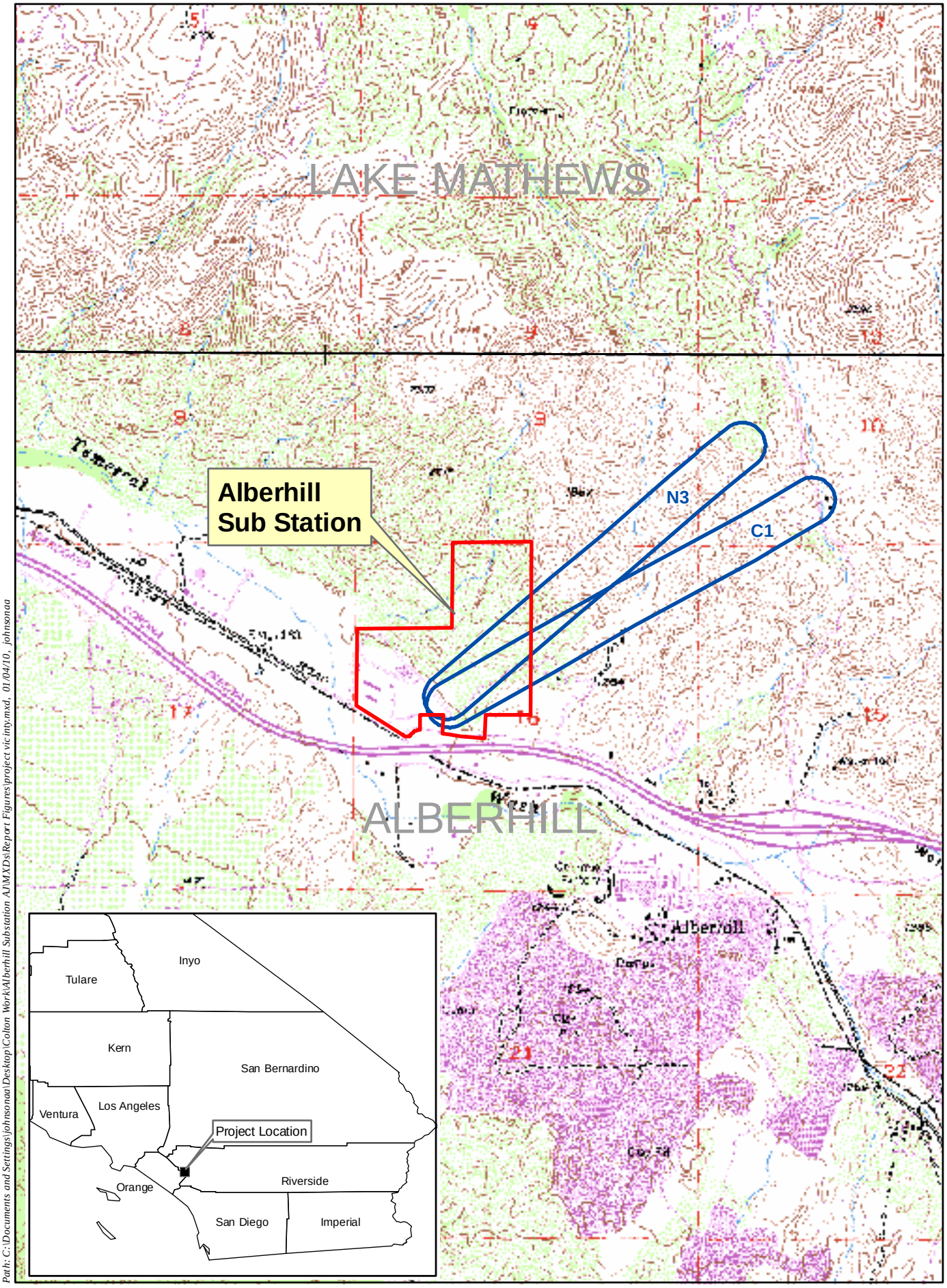
Thomas, J.R. 1973. Stephens' kangaroo rat survey 1972-73. Calif. Dept. Fish and Game, Special Wildlife Investigations, Job II-54.6. (Final Report)

Table 1. Trap Results for Alberhill, November 2009

Area	# Traps	Date (2009)	Captures*				
			SKR	DKR	CHFA	PEMA	NELE
1	10	13-Nov			1		
	10	14-Nov				1	
	10	15-Nov		1	1	1	
	10	16-Nov			1		
	10	17-Nov		1			
2	15	13-Nov		1	4	3	
	15	14-Nov		1	3	2	
	15	15-Nov		2	4	2	
	15	16-Nov		1	3	3	
	15	17-Nov		1	3	4	
3	25	13-Nov		5		7	
	25	14-Nov		4	6	6	
	25	15-Nov		5	5	4	
	25	16-Nov		4	3	5	
	25	17-Nov		3	4	4	
4	25	13-Nov		3			
	25	14-Nov				4	
	25	15-Nov		1		3	
	25	16-Nov		1	1	4	
	25	17-Nov		1		3	
5	25	13-Nov	**1AM**	4		4	
	25	14-Nov	**1AM, 1AF**	3		4	
	25	15-Nov	**1AF**	2	3	5	
	25	16-Nov	**1AM**	2		5	
	25	17-Nov	**1AF**		2	3	
6	15	13-Nov		1	1	5	1
	15	14-Nov		1	1	4	1
	15	15-Nov				6	
	15	16-Nov		1		5	1
	15	17-Nov			1	4	
7	10	13-Nov		2	2	1	
	10	14-Nov		1	2	2	
	10	15-Nov		2	2	1	
	10	16-Nov		1	1	1	
	10	17-Nov			1		
8	15	13-Nov				3	
	15	14-Nov			1	4	
	15	15-Nov		1	1	3	
	15	16-Nov			2	2	
	15	17-Nov		1	1	1	
9	25	13-Nov		1	4	3	
	25	14-Nov		1	3	4	
	25	15-Nov			2	5	
	25	16-Nov		1	3	4	
	25	17-Nov		1	3	3	
10	10	13-Nov		2			
	10	14-Nov		2		1	
	10	15-Nov		1	1		
	10	16-Nov		2			
	10	17-Nov		1		1	
11	50	13-Nov		8	12		
	50	14-Nov		6	9	1	
	50	15-Nov		8	10	1	
	50	16-Nov		7	7	2	
	50	17-Nov		9	8		
Totals	**1125**		**6 (3 individuals)**	**98**	**142**	**141**	**3**

*Captures - Only SKR were marked. Thus, totals for other species do not represent number of unique individuals

SKR	Stephens' kangaroo rat (*Dipodomys stephensi*)
DKR	Dulzura kangaroo rat (*Dipodomys simulans*)
SDPM	San Diego pocket mouse (*Chaetodipius fallax fallax*)
PEMA	Deer mouse (*Peromyscus maniculatus*)



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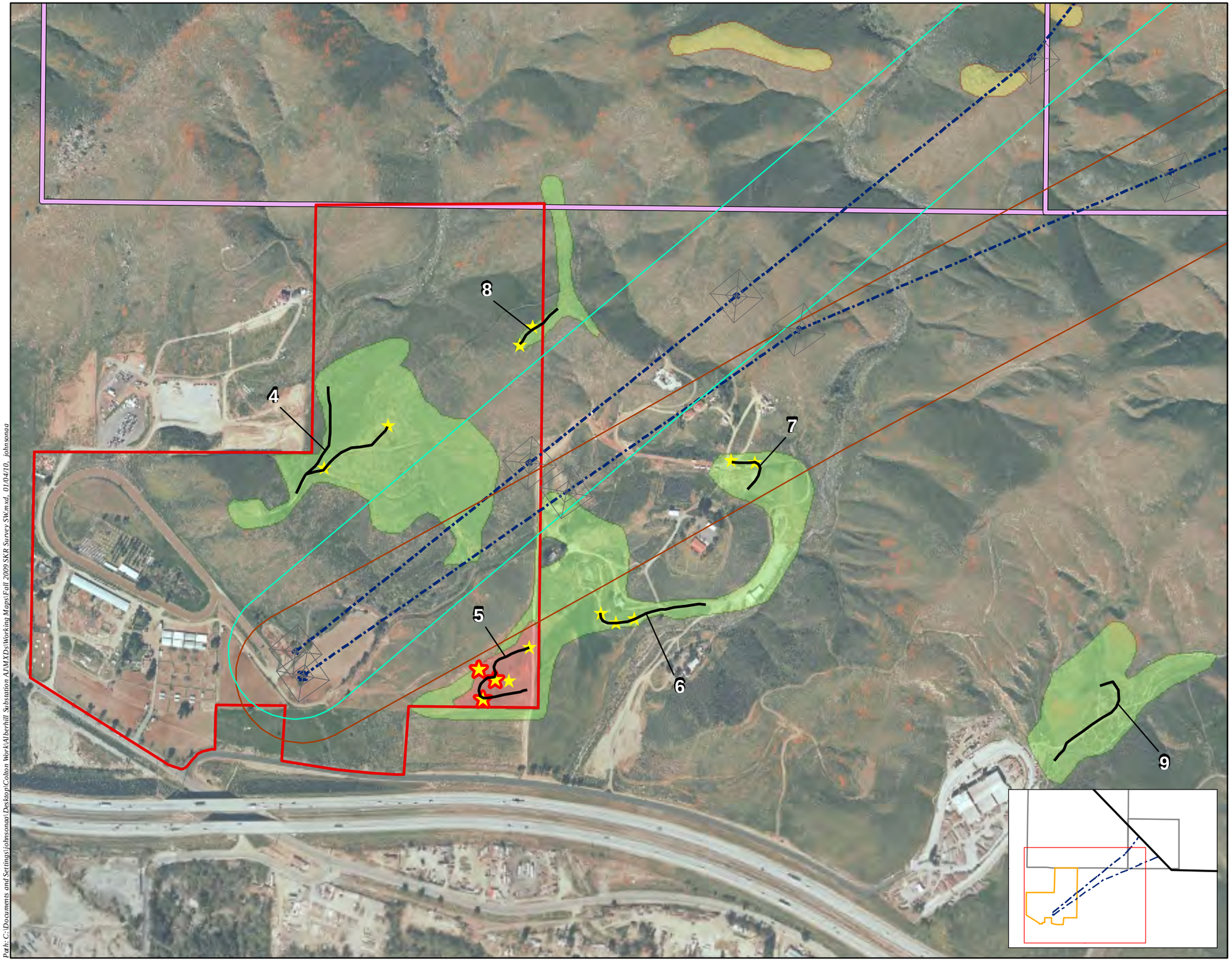
0 500 1,000 2,000 Feet

Substation Location

500 kV Corridors

Project Location
Alberhill Substation Site
Riverside County, CA

Figure 1



Legend

- Existing 500 kV Transmission Line
- C1 Study Area
- N3 Study Area
- Proposed 500kv Transmission Line
- Substation Location
- RCHCA Managed Land

Kangaroo Rat Surveys

- Active Kangaroo Rat Scat and Burrow Locations - Summer 2009
- Stephens' Kangaroo Rat Captures - Fall 2009
- SKR Traplines - Fall 2009
- Occupied SKR Habitat (SKR present, confirmed by trapping Fall 2009)
- Potential habitat for SKR (Scat and burrows present at most locations [as indicated by yellow stars]. Due to the density of herbaceous vegetation at some polygons in summer 2009, kangaroo rat sign may have been missed. Such polygons were re-checked for sign in fall 2009 when herb cover was reduced, to confirm kangaroo rat absence. Those confirmed as lacking kangaroo rat sign are shown here as unoccupied habitat [see below].)
- Unoccupied by kangaroo rats, confirmed by two (summer and fall) checks for sign.

MAP NOTES

Data Source
AECOM - SKR Survey
SCE - Site Boundary and Transmission Data
Aerial- 2009, i-cubed©
Riverside County Assessor - RCHCA Managed Land

Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Documents and Settings\johnsonaa\Desktop\Colton Work\Alberhill Substation AJ\MXDs\Working Maps\Fall 2009 SKR Survey SW.mxd
Date: 1/4/2010
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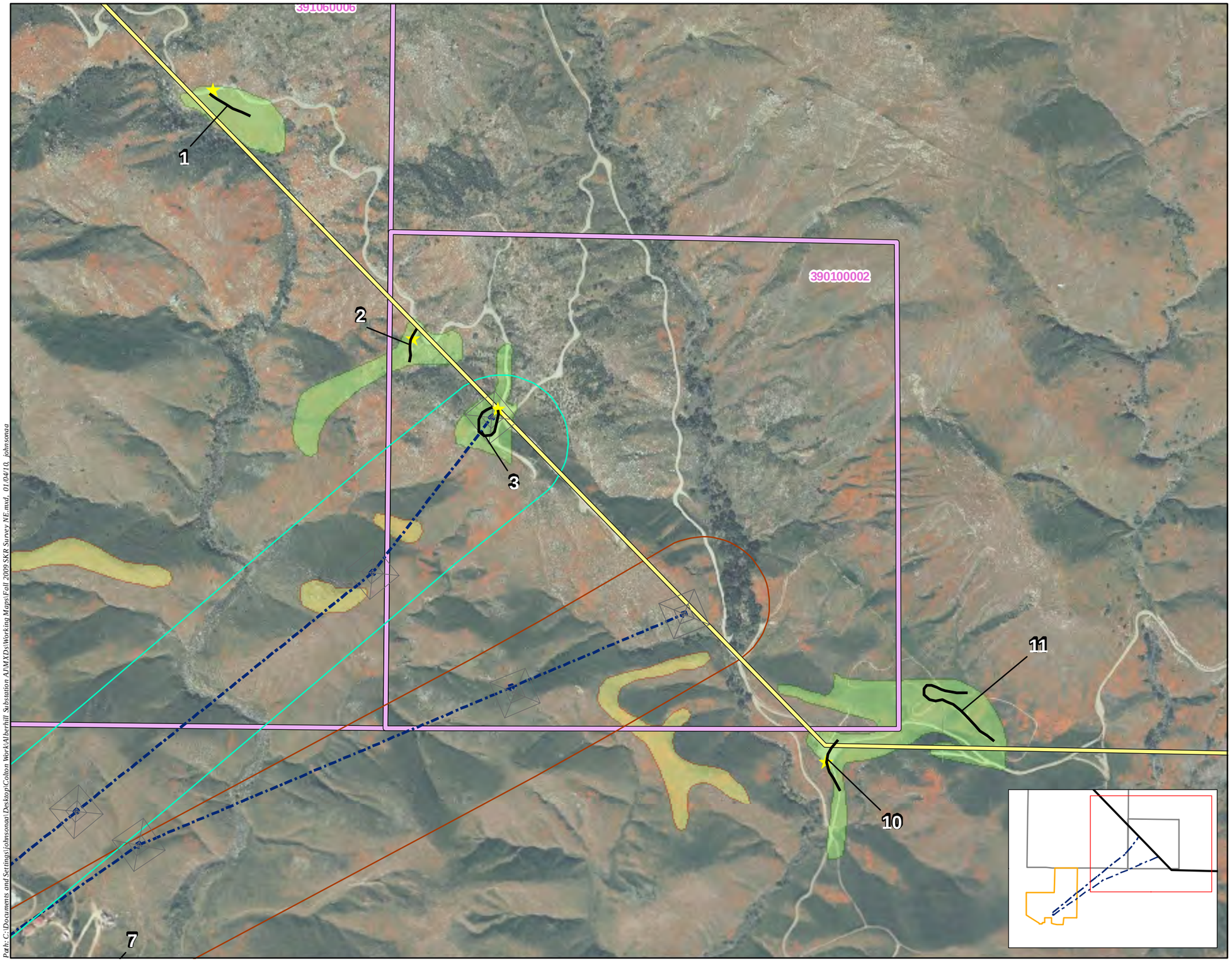
500 250 0 500 Feet

Figure 2

Alberhill System Project
Stephens' Kangaroo Rat Survey
Fall 2009

F-160

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Legend

- Existing 500 kV Transmission Line
- C1 Study Area
- N3 Study Area
- Proposed 500kv Transmission Line
- Substation Location
- RCHCA Managed Land

Kangaroo Rat Surveys

- Active Kangaroo Rat Scat and Burrow Locations - Summer 2009
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- Unoccupied by kangaroo rats, confirmed by two (summer and fall) checks for sign.

MAP NOTES

Data Source
AECOM - SKR Survey
SCE - Site Boundary and Transmission Data
Aerial- 2009, i-cubed©
Riverside County Assessor - RCHCA Managed Land

Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Documents and Settings\johnsonaa\Desktop\Colton Work\Alberhill Substation AJ\MXDs\Working Maps\Fall 2009 SKR Survey NE.mxd
Date: 1/4/2010

PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

500 250 0 500 Feet

Figure 3

Alberhill System Project
Stephens' Kangaroo Rat Survey
Fall 2009

F-161

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F2
2010 Focused Species Survey Reports

ALBERHILL SYSTEM PROJECT
2010 SENSITIVE PLANT SURVEY REPORT



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July 2010

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List of Acronyms

asl	above sea level
BTR	Biological Technical Report
CDFG	California Department of Fish and Game
cm	centimeter
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
dm	decimeter
ESA	Environmentally Sensitive Area
HRRP	Habitat Restoration and Revegetation Plan
kV	kiloVolt
mm	millimeter
MVA	Mega Volt Ampere
NEPSA	Narrow Endemic Plant Survey Area
RCA	Western Riverside Regional Conservation Authority
Sub	Subtransmission
T/L	transmission line
UCR	University of California, Riverside
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program
WMP	Weed Management Plan
WRCMSHCP	Western Riverside County Multiple Species Habitat Conservation Plan

1.0 Introduction

1.1 Purpose and Project Description

The purpose of this report is to document the results of the 2010 sensitive plant surveys conducted for the Alberhill System Project during the spring of 2010.

The purpose of the sensitive plant surveys was to determine presence/absence of federal, state, California Native Plant Society (CNPS), and Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP) sensitive plant species identified as having the potential to occur within or adjacent to the Project Area (target sensitive plant species). The Alberhill System Project is within the WRMSHCP. The WRCMSHCP, administered by the Regional Conservation Authority (RCA), provides protection for covered species and requires surveys for Criteria and Narrow Endemic Plants in certain areas.

Southern California Edison Company (SCE) proposes to construct the Alberhill System Project (Project) to serve current and projected demand for electricity and maintain electric system reliability in southwestern Riverside County, including the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar as well as the surrounding unincorporated areas.

The Project Area is defined as the area analyzed for the following Project components: the proposed Alberhill Substation, the proposed 500 kiloVolt (kV) transmission lines (T/L), the proposed 115 kV Subtransmission (Sub) T/L, and the alternative 115 kV Sub T/L (Figure 11).

- The proposed Alberhill Substation would be an unstaffed, automated 1,120 Mega Volt Ampere (MVA) 500/115 kV substation with an ultimate build-out of 1,680 MVA. Based on the preliminary design, approximately 8,000 cubic yards of soil, vegetation, and rock would be removed from the site (area of anticipated direct impact). In addition, approximately 10,320 cubic yards of soil would be removed as a result of excavation for foundation and building footings. Demolition of the existing horse ranch and relocation of a 30-inch gravity agricultural water line (owned and operated by Elsinore Valley Municipal Water District) would be required prior to mass grading. The horse ranch and adjacent undeveloped areas compose the Alberhill Substation survey area.

- The proposed 500 kV transmission lines (T/L) would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500 kV T/L. The components of the 500 kV T/L include the following: the proposed N3 500 kV transmission line (N3 survey area [to the Alberhill Substation]), the proposed C1 500 kV transmission line (C1 survey area [from the Alberhill Substation]), and the existing Serrano-Valley 500 kV T/L (Existing 500 kV T/L alignment). Collectively all three of these areas, as well as the proposed pull and tensioning locations, are referred to as the 500 kV T/L survey area. The 500 kV T/L survey area encompasses a 700-foot-wide corridor (350 feet on either side of the proposed and existing 500 kV T/L) around each of the 500 kV T/L project components.

- The proposed 115 kV Sub T/L would consist of a new 115 kV Sub T/L and modification of the existing 115 kV Sub T/L. The 115 kV Sub T/L would transfer electrical service of five existing 115/12 kV substations (Ivyglen, Fogarty, Elsinore, Skylark, and Newcomb

substations) to the new 500/115 kV Alberhill Substation. A Western Riverside County Narrow Endemic Plant Survey Area (NEPSA) identified along the 115 kV Sub T/L composes the kV Sub T/L survey area. The area analyzed for the 115 kV Sub T/L survey area encompasses a 400-foot-wide corridor (200 feet on either side of the 115 kV Sub T/L) around the 115 kV Sub T/L project components.

- An alternative to the proposed 115 kV Sub T/L has also been analyzed (alternative 115 kV Sub T/L). This alternative consists of an optional routing of the eastern portion of the proposed 115 kV Sub T/L. Sensitive plant surveys were not conducted within the alternative 115 kV Sub T/L lines during the 2010 sensitive plant surveys

AECOM was tasked with conducting sensitive plant surveys within the Alberhill Substation survey area, within the 500 kV T/L survey area, and within one NEPSA in the 115 kV Sub T/L study area.

Target sensitive plant species were identified as having a potential of occurring within the Project Area based on a literature search. Two sensitive plant surveys were conducted during the spring of 2010. This report describes the 2010 survey methodology, discusses survey results and conclusions, and offers recommendations for impact avoidance and mitigation to sensitive plant species that were encountered during the 2010 sensitive plant species surveys.

1.2 Background

In November 2008, AECOM conducted a habitat assessment of the proposed Alberhill Substation site. Twenty sensitive plant species were determined to have a moderate potential for occurrence within and adjacent to the Alberhill Substation study area. As a result, the biological technical report (BTR, AECOM, 2009) recommended multiple sensitive plant surveys be conducted during the blooming periods of these species.

During spring of 2009, a sensitive plant survey was conducted by AECOM at the Alberhill Substation survey area. Two sensitive plant species, long spined spineflower (*Chorizanthe polygonoides* var. *longispina*) and paniculate tarplant (*Dienandra (Hemizonia) paniculata*), were observed during the sensitive plant survey of the substation site.

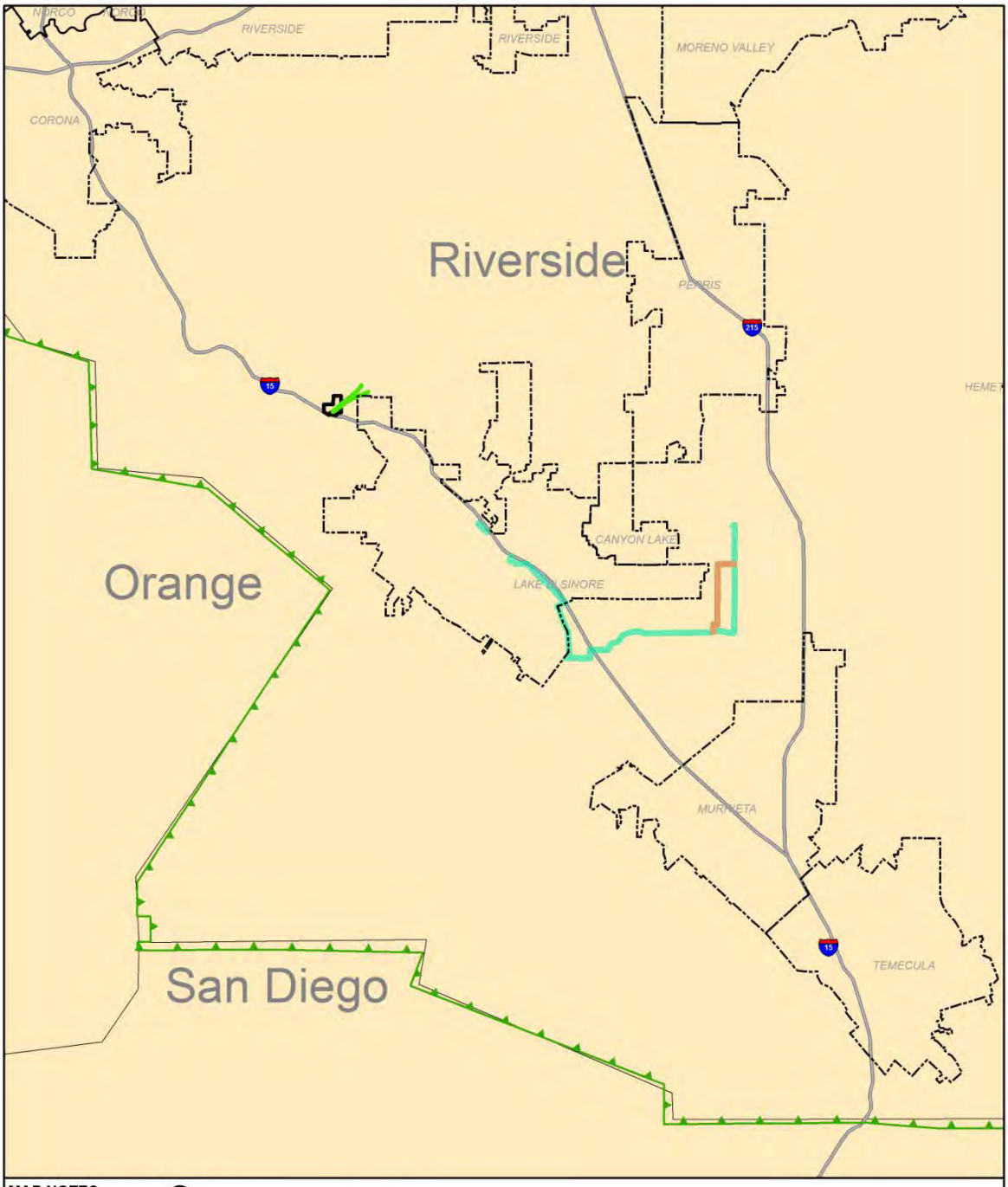
In July 2009, AECOM conducted a habitat assessment within the proposed 500 kV and 115 kV Sub T/L survey areas. Cumulatively, 61 sensitive plant species were determined to have a moderate to high potential for occurrence within and adjacent to the 500 kV T/L and 115 kV Sub T/L survey areas. The BTR recommended multiple sensitive species surveys within the next available blooming period (AECOM 2009b).

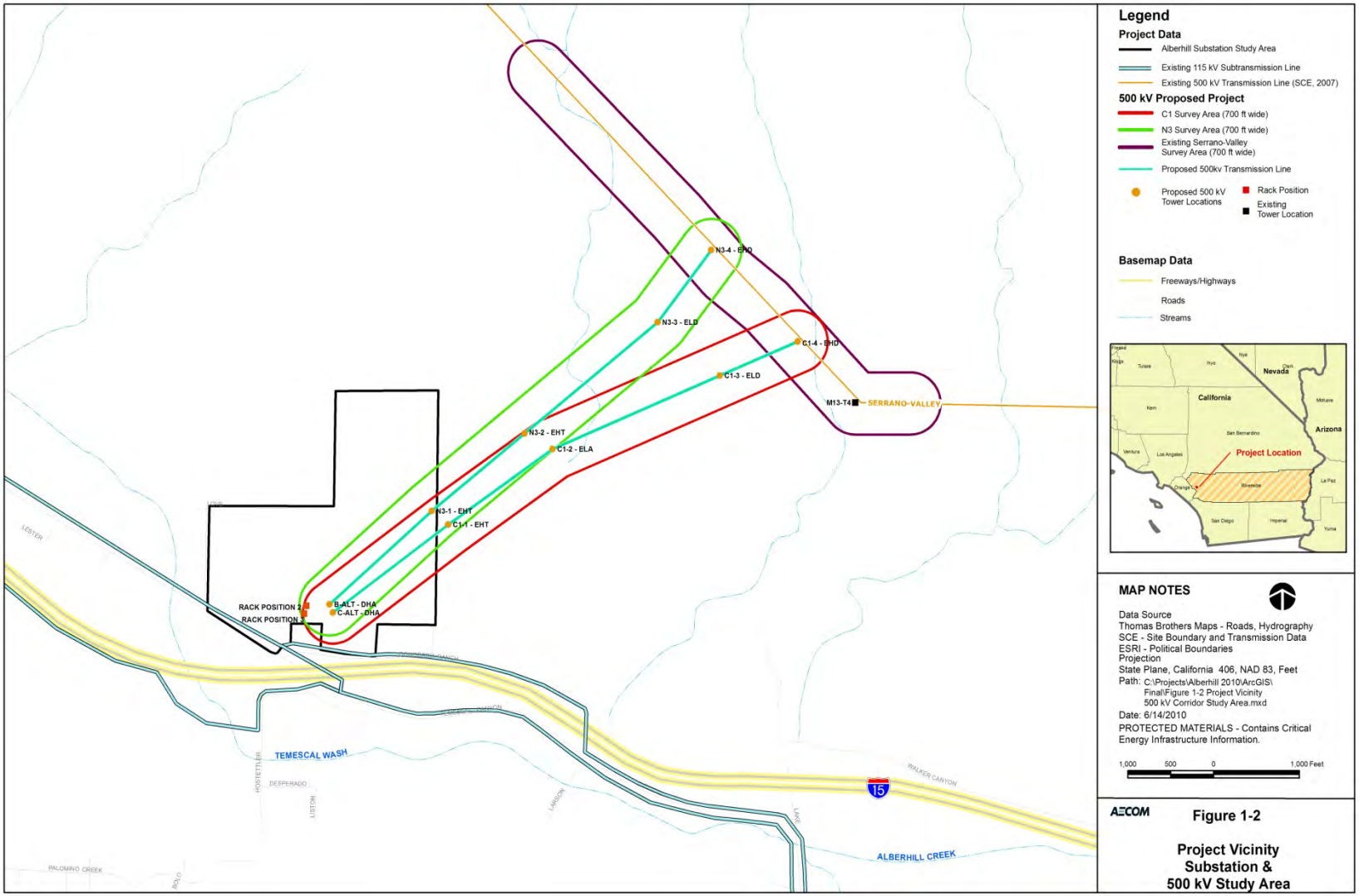
Due to below average rainfall in 2009 and predicted average to above-average rainfall throughout the rainy season for 2010, SCE decided to re-survey the Alberhill Substation survey area and conduct sensitive plant surveys for the 500 kV T/L and 115 kV Sub T/L survey areas during the Spring 2010 survey time period.

1.3 Survey Locations

1.3.1 Alberhill Substation Survey Area

The Alberhill Substation survey area is approximately 125 acres and is located within the Temescal Valley, south of Corona, California(see Figure 1-2). The Project Area can be found on the Alberhill, CA 7.5 minute United States Geological Survey (USGS) topographic quadrangle (1980). The Alberhill Substation survey area is located within the northwest ¼ of Section 16, Township 5 South, Range 5


NORCO
RIVERSIDE
RIVERSIDE
MORENO VALLEY
CORONA
Riverside
PERRIS
CANYON LAKE
LAKE ELSINORE
Orange
MURRIETA
TEMECULA
San Diego
MAP NOTES
Data Source
ESRI - Roads, Hydrography
SCE - Site Boundary and Transmission Data
WRMSHCP Plan - Plan Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 1-1 Regional Project Location.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 1.5 3 6 Miles
Project Data
Alberhill Substation Study Area
500 kV Survey Area
Proposed 115 kV Survey Area
Alternative 115 kV Survey Area
Basemap Data
Freeways/Highways
WRMSHCP Boundary
County Boundary
City Boundary
Figure 1-1
Regional Location
Alberhill System Project


N3-4 - EHD
N3-3 - ELD
C1-4 - EHD
C1-3 - ELD
M13-T4
SERRANO-VALLEY
N3-2 - EHT
C1-2 - ELA
N3-1 - EHT
C1-1 - EHT
RACK POSITION 2
RACK POSITION 1
B-ALT - DHA
C-ALT - DHA
LESTER
TEMESCAL WASH
DESPERADO
HOSTETTER
LISTON
LARSON
WALKER CANYON
LAKE
ALBERHILL CREEK
PALOMINO CREEK
BOLO
15
Legend
Project Data
Alberhill Substation Study Area
Existing 115 kV Subtransmission Line
Existing 500 kV Transmission Line (SCE, 2007)
500 kV Proposed Project
C1 Survey Area (700 ft wide)
N3 Survey Area (700 ft wide)
Existing Serrano-Valley Survey Area (700 ft wide)
Proposed 500kv Transmission Line
Proposed 500 kV Tower Locations
Rack Position
Existing Tower Location
Basemap Data
Freeways/Highways
Roads
Streams
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 1-2 Project Vicinity 500 kV Corridor Study Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
1,000 500 0 1,000 Feet
AECOM
Figure 1-2
Project Vicinity Substation & 500 kV Study Area

West, in the city of Lake Elsinore, California. The Alberhill Substation survey area elevation ranges from 1,200 to 1,620 feet above sea level (asl).

1.3.2 500 kV T/L Survey Area

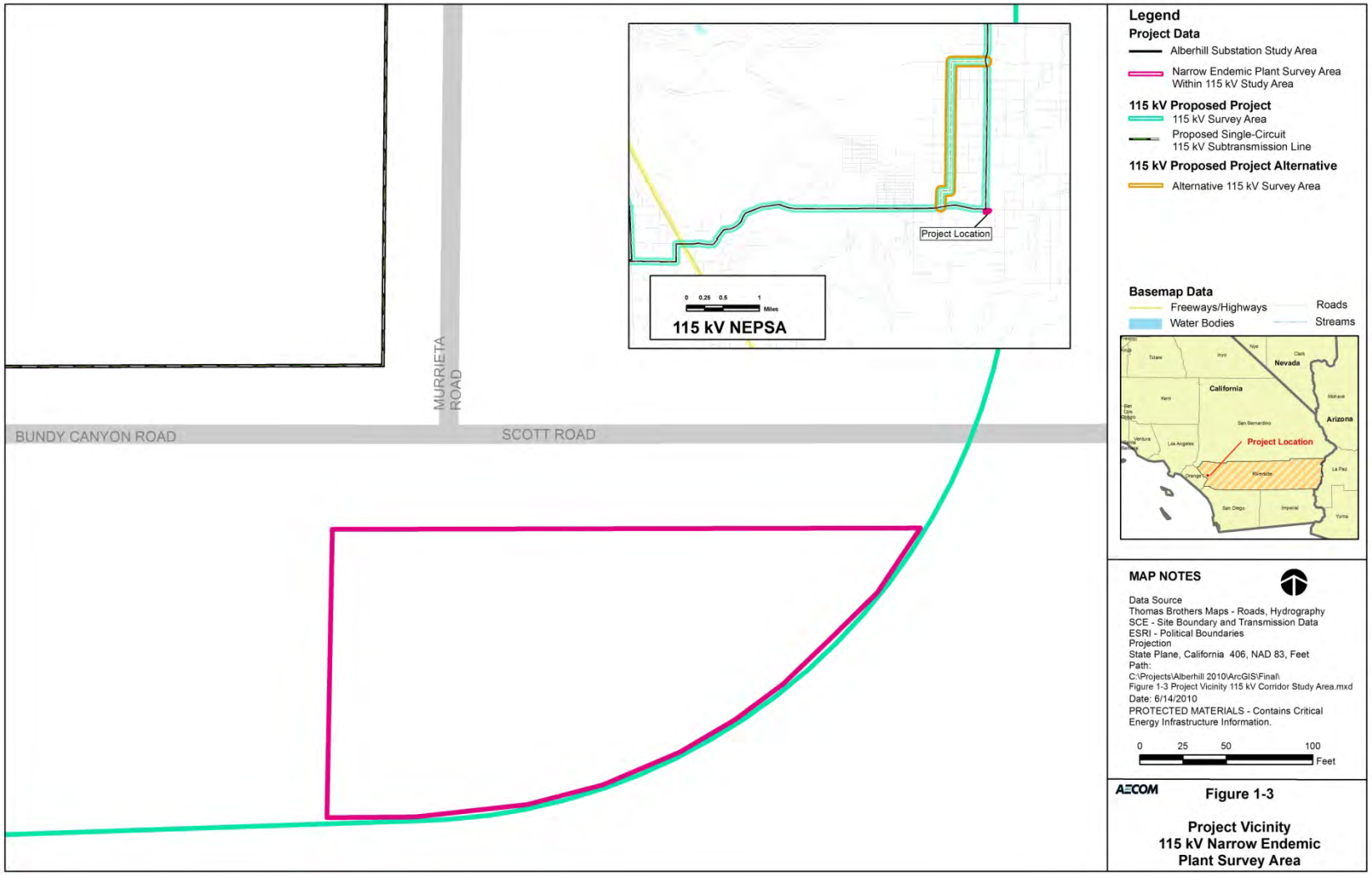
The 500 kV T/L survey area is approximately 319 acres and is located northeast of the proposed Alberhill Substation site. The 500 kV T/L survey area traverses unincorporated portions adjacent to the City of Lake Elsinore, California, within Riverside County and is located within the Lake Mathews and Alberhill CA 7.5 minute USGS topographic quadrangles. On the Alberhill USGS quadrangle, the corridor alternatives are located within the southeast quarter of Section 9, the southwestern quarter of Section 10, the northwestern quarter of Section 15, and the northern half of Section 16, all within Township 5 South, Range 5 West.

The northeast portion of the 500 kV study area is located within the Gavilan Hills, which can be characterized as steep terrain. The southwest portion of the 500 kV study area overlaps with the eastern portion of the Alberhill Substation survey area (Figure 1-2). The 500 kV T/L survey area elevation ranges from 1,200 to 1,861 feet asl.

1.3.3 115 kV Sub T/L Survey Area

The portion of the 115 kV alignment that has been designated as a NEPSA by the WRCMSHCP consists of approximately one acre (Note: The 115 kV Sub T/L survey area does not contain any WRCMSHCP Criteria Plant Species Survey Areas). The NEPSA within the 115 kV study area is located south of the intersection of Bundy Canyon Road and Murrieta Road. The 115 kV study is located on the Romoland CA 7.5 minute USGS topographic quadrangle. The 115 kV study area is located within the northwest ¼ of Section 21, Township 6 South, Range 3 West, in the City of Menifee, California.

The NEPSA within the 115 kV study area can be characterized as a gently inclined, south-facing slope, dominated by dense chamise chaparral. The elevation of the 115 kV Sub T/L survey area is approximately 1,700 feet asl. The 115 kV NEPSA is approximately 14 miles southeast of the proposed Alberhill Substation and 500 kV T/L survey areas (Figure 1-3).


MURRIETA ROAD
BUNDY CANYON ROAD
SCOTT ROAD
Project Location
0 0.25 0.5 1
Miles
115 kV NEPSA
Legend
Project Data
Alberhill Substation Study Area
Narrow Endemic Plant Survey Area Within 115 kV Study Area
115 kV Proposed Project
115 kV Survey Area
Proposed Single-Circuit 115 kV Subtransmission Line
115 kV Proposed Project Alternative
Alternative 115 kV Survey Area
Basemap Data
Freeways/Highways
Roads
Water Bodies
Streams
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path:
C:\Projects\Alberhill 2010\ArcGIS\Final\
Figure 1-3 Project Vicinity 115 kV Corridor Study Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 25 50 100
Feet
AECOM
Figure 1-3
Project Vicinity
115 kV Narrow Endemic
Plant Survey Area

2.0 Methodology

Survey design and implementation were based on the following survey protocol guidance: *U.S. Fish and Wildlife Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species (*USFWS 2000*)*; *Protocols for Surveying and Evaluation Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009); and *California Native Plant Society Botanical Survey Guidelines* (CNPS 2001).

2.1 Literature and Database Research

A literature and database search of the California Natural Diversity Database (CNDDB) and CNPS *Inventory for Rare and Endangered Vascular Plants of California* was conducted in March 2010.

Narrow Endemic and Criteria Area Plant Species GIS data developed to support the WRCMSHCP was used to create figures depicting survey areas that occurred within the MSHCP sensitive plant survey areas (Figures 2-1 and 2-2).

The *Focused Rare Plant Surveys, April and May 2009, Proposed Alberhill Substation Site, Lake Elsinore, CA* (AECOM 2009) was also reviewed.

Results of the 2010 literature and database search identified 91 plant species based in the nine USGS 7.5 Series Topographic quadrangles for the Project Area locations (center quadrangles: Alberhill, Lake Matthews, and Romoland; surrounding quadrangles: Santiago Peak, Corona South, Lake Elsinore, Steele Peak, Perris, Lakeview, Winchester, Bachelor Mtn., Wildomar, Sutton Peak, and Cañada Gobernadora). Additionally, all survey areas fall within the fee area for the WRCMSHCP; and a number of species, including those federal, state, CNPS, and WRCMSHCP (Narrow Endemic and Criteria Area plant species) listed, have the potential to occur on or adjacent to each of the survey areas.

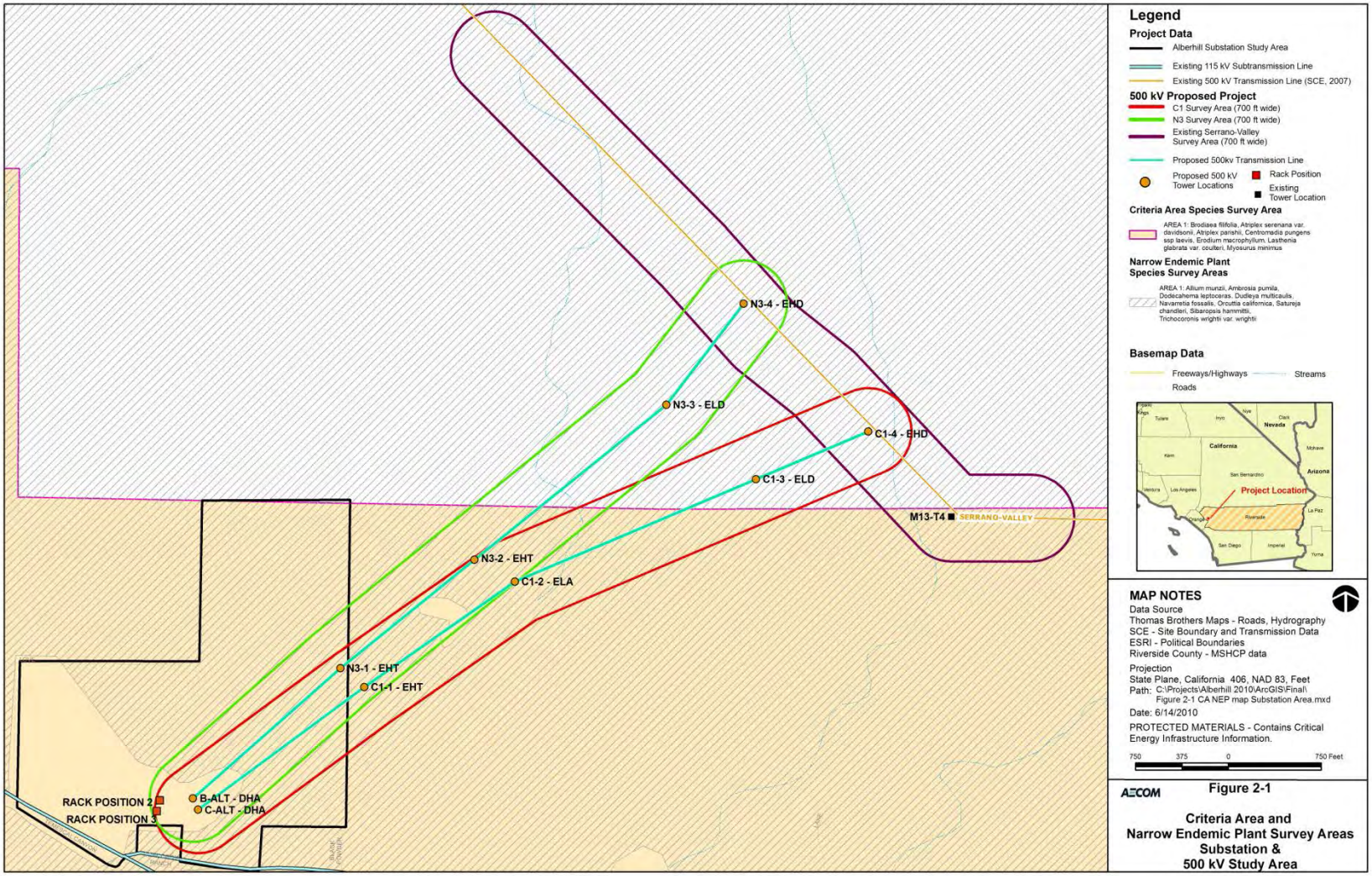
The target sensitive plant species were divided into two groups (early spring and late spring) based on blooming periods for survey scheduling.

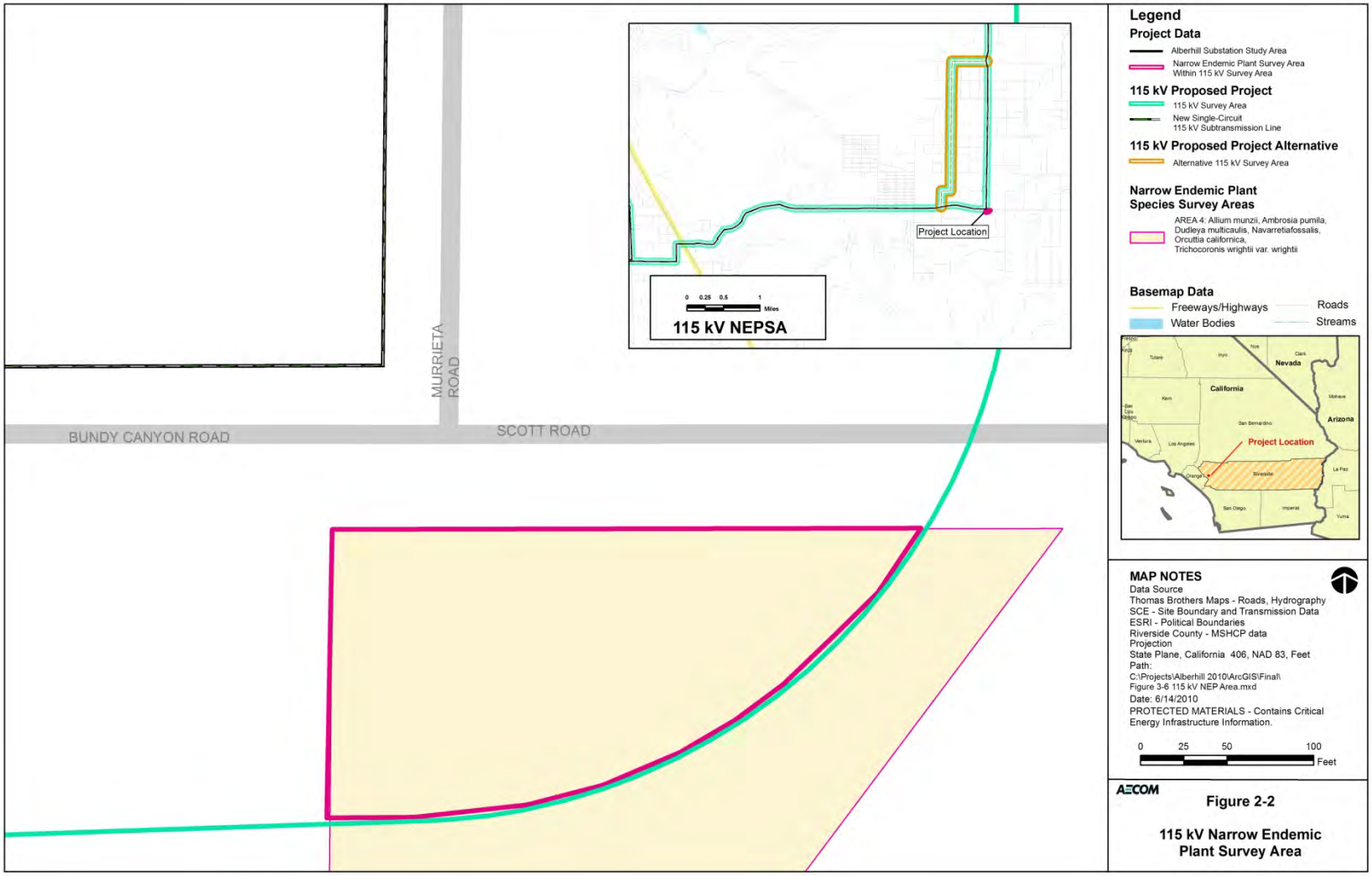
2.2 Voucher Specimen Review

Prior to the field surveys, the AECOM biologists met University of California Riverside (UCR), Herbarium staff to study and become familiar with available target sensitive plant specimens.

As mentioned earlier, the BTRs prepared in 2009 for the Alberhill Substation site and 500- and 115kV Study areas identified a number of sensitive plant species that had potential to occur on or adjacent to each of the three survey areas. Potential occurrence in each of the BTRs was based on mapped vegetation communities and habitat preferences for each of the sensitive plant species. Both plant lists from each of the BTRs were combined to produce one list prior to the herbarium visit. This list was then supplemented with any sensitive plant species that were queried from the CNDDB and CNPS databases, but not already on the list from the two BTRs. The final version of this list became the preliminary list of target sensitive plant species for the 2010 survey period.

The preliminary sensitive plant species list was then refined during the herbarium visit by discussing known range and/or habitat preferences for each of the target sensitive plant species with Andy


N3-4 - EHD
N3-3 - ELD
C1-4 - EHD
C1-3 - ELD
M13-T4
SERRANO-VALLEY
N3-2 - EHT
C1-2 - ELA
N3-1 - EHT
C1-1 - EHT
RACK POSITION 2
RACK POSITION 3
B-ALT - DHA
C-ALT - DHA
Legend
Project Data
Alberhill Substation Study Area
Existing 115 kV Subtransmission Line
Existing 500 kV Transmission Line (SCE, 2007)
500 kV Proposed Project
C1 Survey Area (700 ft wide)
N3 Survey Area (700 ft wide)
Existing Serrano-Valley Survey Area (700 ft wide)
Proposed 500kv Transmission Line
Proposed 500 kV Tower Locations
Rack Position
Existing Tower Location
Criteria Area Species Survey Area
AREA 1: Brodiaea filifolia, Atriplex serenana var. davidsonii, Atriplex parishii, Centromadia pungens ssp laevis, Erodium macrophyllum, Lasthenia glabrata var. coulteri, Myosurus minimus
Narrow Endemic Plant Species Survey Areas
AREA 1: Allium munzii, Ambrosia pumila, Dodecahema leptoceras, Dudleya multicaulis, Navarretia fossalis, Orcuttia californica, Satureja chandleri, Sibaropsis hammittii, Trichocoronis wrightii var. wrightii
Basemap Data
Freeways/Highways
Streams
Roads
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Riverside County - MSHCP data
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\ Figure 2-1 CA NEP map Substation Area.mxd
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750 375 0 750 Feet
AECOM
Figure 2-1
Criteria Area and Narrow Endemic Plant Survey Areas Substation & 500 kV Study Area


MURRIETA ROAD
BUNDY CANYON ROAD
SCOTT ROAD
Project Location
0 0.25 0.5 1 Miles
115 kV NEPSA
Legend
Project Data
Alberhill Substation Study Area
Narrow Endemic Plant Survey Area Within 115 kV Survey Area
115 kV Proposed Project
115 kV Survey Area
New Single-Circuit 115 kV Subtransmission Line
115 kV Proposed Project Alternative
Alternative 115 kV Survey Area
Narrow Endemic Plant Species Survey Areas
AREA 4: Allium munzii, Ambrosia pumila, Dudleya multicaulis, Navarretiafossalis, Orcuttia californica, Trichocoronis wrightii var. wrightii
Basemap Data
Freeways/Highways
Roads
Water Bodies
Streams
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Riverside County - MSHCP data
Projection
State Plane, California 406, NAD 83, Feet
Path:
C:\Projects\Alberhill 2010\ArcGIS\Final\
Figure 3-6 115 kV NEP Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
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AECOM
Figure 2-2
115 kV Narrow Endemic Plant Survey Area

Sanders, curator of the UCR Herbarium and local endemic plant expert for Western Riverside County. The final list of sensitive plant species became the guide for which voucher specimens were reviewed.

2.3 Reference Population Visit

The Consortium of California Herbaria (online database) was used to locate and map several reference sites prior to field surveys. Due to the number of target sensitive plant species that had the potential to occur, the reference site visits were limited to federal and state listed taxa. The reference sites were determined based on proximity to the survey area, number of species recorded at each location, and the date a voucher specimen was collected. The reference sites were visited one day prior to initiating the first phase of field surveys. Data collected at each of the reference sites included target plant phenology, general habitat descriptions, and associated plant species observed growing in conjunction with the sensitive target plant species. Representative photographs of each target sensitive plant species observed were collected (Appendix A).

2.4 Survey Implementation

2.4.1 General Survey Methodology

Surveys consisted of comprehensive and systematic techniques following CDFG, USFWS and CNPS protocols. Transects were spaced so that taxa could be identified between survey transects in each habitat.

Survey timing was defined by the target species blooming periods. Two survey periods were chosen for the 2010 sensitive plant surveys: early to mid spring (March-April) and mid to late spring (May-June).

Biologists conducting the survey carried the following equipment:

- Aerial maps and reference markers of the survey area
- Garmin Rino 530 HcX and Garmin 76c GPS units with preloaded Project Area data layers
- Field notebook for documenting species encountered and plant habitat characteristics
- Digital camera to document findings by photographing habitat conditions and flora of interest
- 10x hand lenses
- Plant press to collect unknown species and voucher specimens.

A CDFG California Native Species Field Survey Form was completed for each sensitive plant or plant population encountered during the survey.

General data recorded during sensitive plant surveys, included:

- Date, time, and weather conditions of each survey
- GPS waypoints for observed sensitive plants or areas of ecological interest
- Habitat conditions

- All vascular plants observed onsite (native or naturalized)
- Any special status species observed and associated species
- A representative photograph of each sensitive plant species found and of vegetation community types encountered

Sensitive plant population size was estimated using one of two methods. The first method was used for small, inconspicuous species (e.g., *Chorizanthe polygonoides* var. *longispina*). The first method consisted of establishing a representative sample in a small area within the sensitive plant population, counting the number of sensitive plants within the sample area, and using the number within the sample area to extrapolate the size of the entire observed population. The second method was used for larger, more conspicuous colonial species (e.g., *Romneya coulteri*). The second method consisted of making a crude stem count. Both methods were designed to estimate sensitive plant population size at a particular location to an order of magnitude.

In instances where safety concerns or inaccessibility prevented an area from being surveyed, 8x35-42 or greater power binoculars were used to scan the inaccessible areas for occurrence of target species.

Voucher specimens of common and sensitive plant species collected during the surveys were deposited at the UCR Herbarium.

2.4.2 Site Specific Survey Methodology

2.4.2.1 Alberhill Substation Survey Area

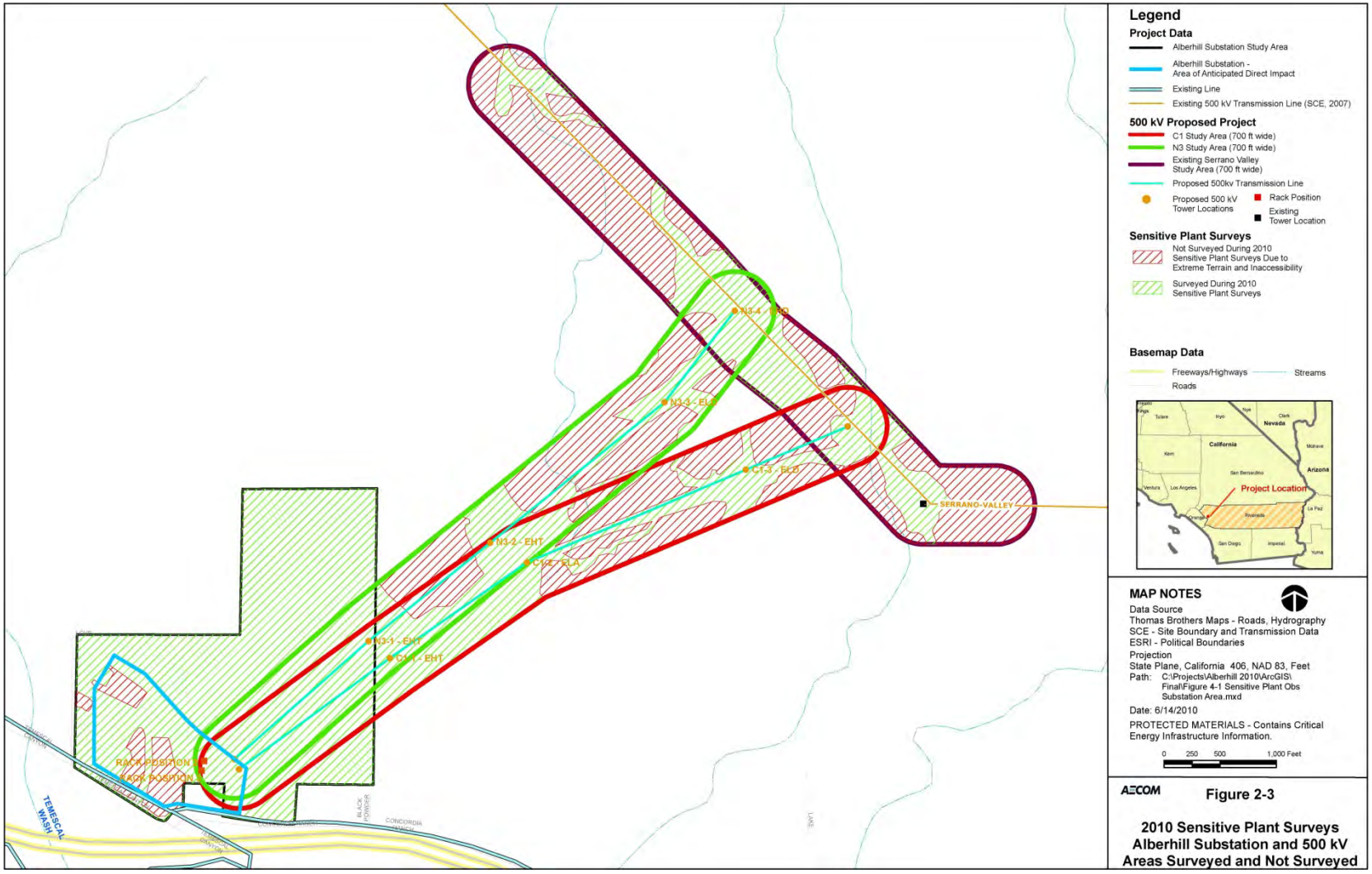
An attempt was made to survey 100 percent of the Alberhill Substation survey area. Some areas of rugged terrain within the northern portions of the Alberhill Substation survey area were inaccessible. Approximately 116 acres were surveyed and 8 acres were not surveyed (due to rugged terrain and inaccessible areas). Figure 2-3 depicts the areas surveyed and not surveyed within the Alberhill Substation survey area.

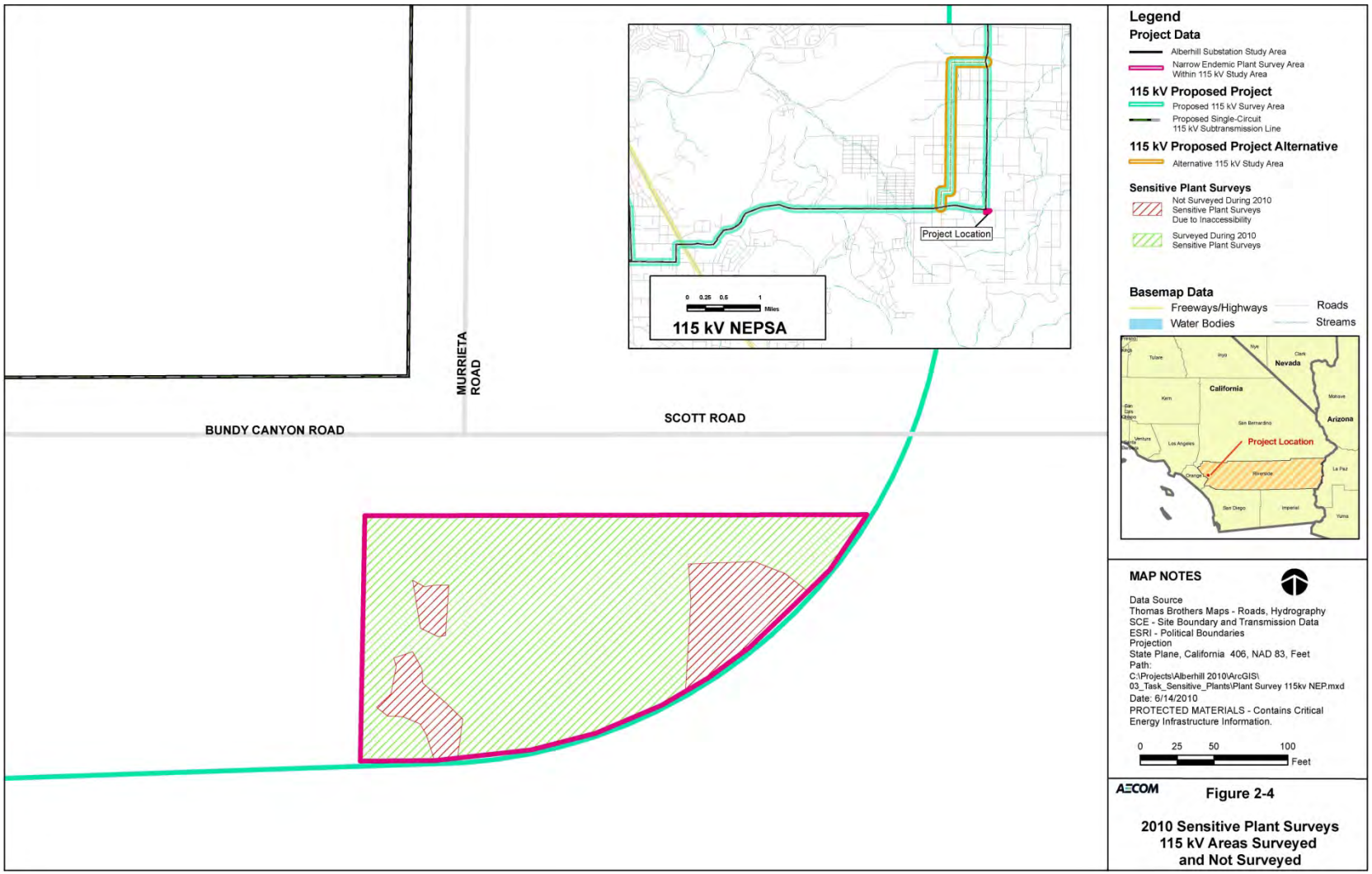
2.4.2.2 500 kV T/L Survey Area

Due to the extensive size and rugged terrain of the 500 kV alignments, sensitive plant surveys within the 500 kV T/L survey area were limited to areas of anticipated direct impact. Direct impact areas included known locations of proposed Project components, including: tower, pull, and tensioning locations. Each Project component location survey included a 200-foot survey buffer so that sensitive plant locations anticipated to be within direct impact areas were surveyed. Each of the 500 kV T/L Project component locations and an associated survey buffer were surveyed. Approximately 190 acres were surveyed and 129 acres were not surveyed (due to rugged terrain). Figure 2-3 depicts the areas surveyed and not surveyed within the 500 kV T/L survey area.

2.4.2.3 115 kV Sub T/L Survey Area

An attempt was made to survey 100 percent of the 115 kV NEPSA. Due to vegetation densities, some areas were inaccessible. Approximately 0.8 acres were surveyed and 0.1 acres were not surveyed. Figure 2-4 depicts the areas surveyed and not surveyed within the 115 kV Sub T/L survey area.


N3-4 - ECD
N3-3 - ECD
C1-3 - ECD
N3-2 - ENT
C1-2 - ELA
N3-1 - ENT
C1-1 - ENT
SERRANO-VALLEY
RACK POSITION
TERESCAL WASH
Legend
Project Data
Alberhill Substation Study Area
Alberhill Substation - Area of Anticipated Direct Impact
Existing Line
Existing 500 kV Transmission Line (SCE, 2007)
500 kV Proposed Project
C1 Study Area (700 ft wide)
N3 Study Area (700 ft wide)
Existing Serrano Valley Study Area (700 ft wide)
Proposed 500kv Transmission Line
Proposed 500 kV Tower Locations
Rack Position
Existing Tower Location
Sensitive Plant Surveys
Not Surveyed During 2010 Sensitive Plant Surveys Due to Extreme Terrain and Inaccessibility
Surveyed During 2010 Sensitive Plant Surveys
Basemap Data
Freeways/Highways
Streams
Roads
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-1 Sensitive Plant Obs Substation Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 250 500 1,000 Feet
AECOM
Figure 2-3
2010 Sensitive Plant Surveys
Alberhill Substation and 500 kV
Areas Surveyed and Not Surveyed


MURRIETA ROAD
BUNDY CANYON ROAD
SCOTT ROAD
Project Location
0 0.25 0.5 1 Miles
115 kV NEPSA
Legend
Project Data
Alberhill Substation Study Area
Narrow Endemic Plant Survey Area Within 115 kV Study Area
115 kV Proposed Project
Proposed 115 kV Survey Area
Proposed Single-Circuit 115 kV Subtransmission Line
115 kV Proposed Project Alternative
Alternative 115 kV Study Area
Sensitive Plant Surveys
Not Surveyed During 2010 Sensitive Plant Surveys Due to Inaccessibility
Surveyed During 2010 Sensitive Plant Surveys
Basemap Data
Freeways/Highways
Roads
Water Bodies
Streams
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path:
C:\Projects\Alberhill 2010\ArcGIS\
03_Task_Sensitive_Plants\Plant Survey 115kv NEP.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 25 50 100
Feet
AECOM
Figure 2-4
2010 Sensitive Plant Surveys
115 kV Areas Surveyed
and Not Surveyed

3.0 Existing Conditions

3.1 Soils

The WRCMSHCP has identified that sensitive plant species are associated with particular soil types. These soil types have been associated with Narrow Endemic and Criteria Area plant species' growth and survival and are considered a "sensitive" soil by the WRCMSHCP. These sensitive soil types include: Altamont clay, Altamont cobbly clay, Auld clay, Auld cobbly clay, Bosanko clay, Clay Pits, Domino silt loam, Porterville clay, Traver fine sandy loam, Traver loamy fine sand, and Willows silty clay (Riverside County 2004).

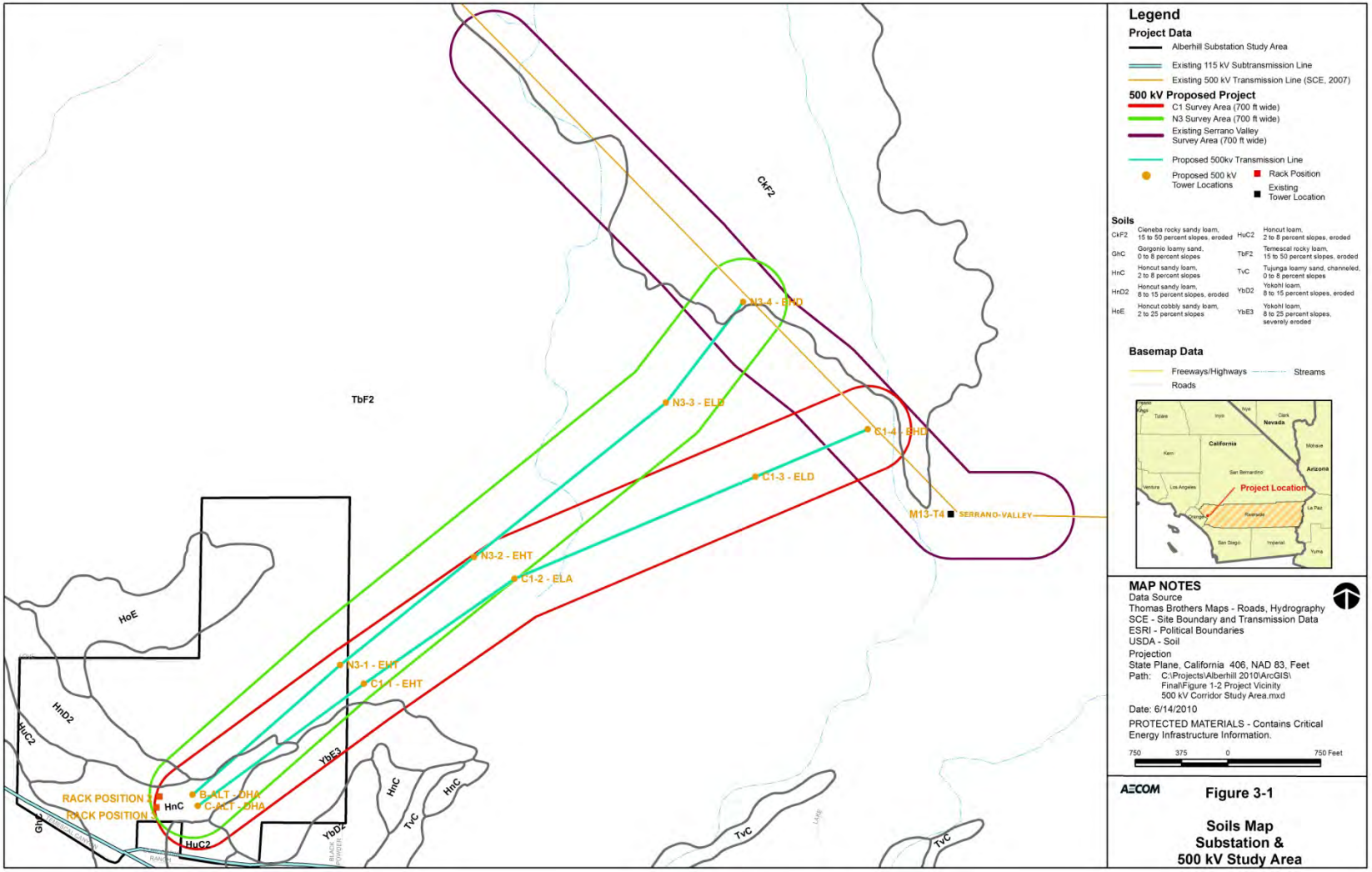
The U.S. Department of Agriculture (USDA) Websoil Survey was reviewed to identify the soil associations that occur within the Project site (USDA-NRCS, 2010). There were no sensitive soil types mapped within any of the survey areas. Soil associations within each of the survey areas are shown on Figures 3-1 and 3-2 and listed below.

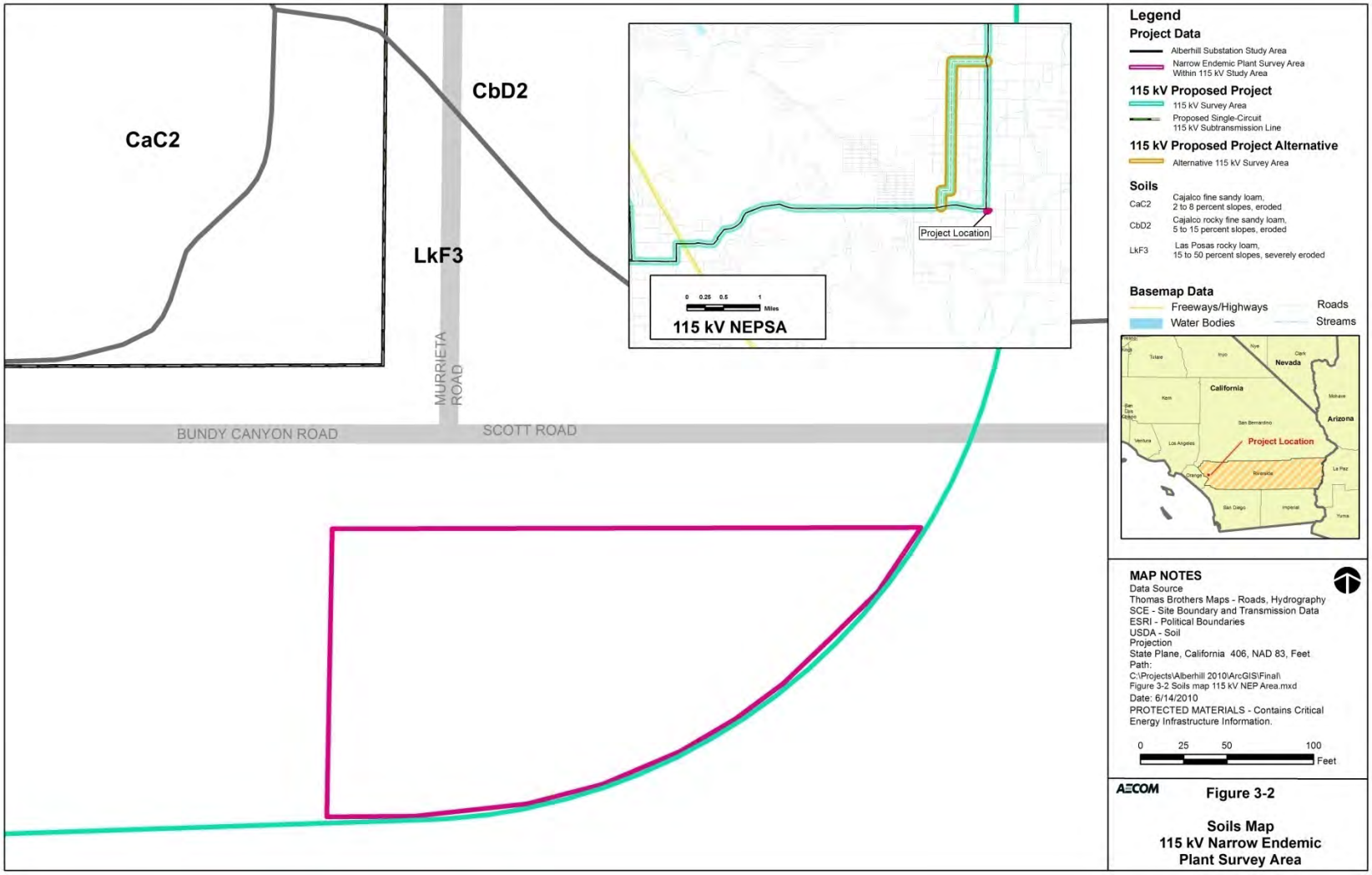
3.1.1 Alberhill Substation Survey Area

- Gorgonio loamy sand, 0 to 8 percent slopes
- Honcut sandy loam, 2 to 8 percent slopes
- Honcut sandy loam, 8 to 15 percent slopes, eroded
- Honcut cobbly sandy loam, 2 to 25 percent slopes
- Honcut loam, 2 to 8 percent slopes, eroded
- Temescal rocky loam, 15 to 50 percent slopes, eroded
- Yokohl loam, 8 to 15 percent slopes, eroded
- Yokohl loam, 8 to 25 percent slopes, severely eroded

3.1.2 500 kV T/L Survey Area

- Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- Temescal rocky loam, 15 to 50 percent slopes, eroded
- Yokohl loam, 8 to 25 percent slopes, severely eroded
- Honcut loam, 2 to 8 percent slopes, eroded
- Honcut sandy loam, 2 to 8 percent slopes
- Honcut sandy loam, 8 to 15 percent slopes, eroded


CkF2
TbF2
HoE
HnD2
HuC2
YbE3
HnC
TvC
YbD2
GhC
M13-T4
SERRANO-VALLEY
N3-4 - EHD
N3-3 - ELD
C1-4 - EHD
C1-3 - ELD
N3-2 - EHT
C1-2 - ELA
N3-1 - EHT
C1-1 - EHT
B-ALT - DHA
C-ALT - DHA
RACK POSITION 1
RACK POSITION 2
Legend
Project Data
Alberhill Substation Study Area
Existing 115 kV Subtransmission Line
Existing 500 kV Transmission Line (SCE, 2007)
500 kV Proposed Project
C1 Survey Area (700 ft wide)
N3 Survey Area (700 ft wide)
Existing Serrano Valley Survey Area (700 ft wide)
Proposed 500kv Transmission Line
Proposed 500 kV Tower Locations
Rack Position
Existing Tower Location
Soils
CkF2 Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
GhC Gorgonio loamy sand, 0 to 8 percent slopes
HnC Honcut sandy loam, 2 to 8 percent slopes
HnD2 Honcut sandy loam, 8 to 15 percent slopes, eroded
HoE Honcut cobbly sandy loam, 2 to 25 percent slopes
HuC2 Honcut loam, 2 to 8 percent slopes, eroded
TbF2 Temescal rocky loam, 15 to 50 percent slopes, eroded
TvC Tujunga loamy sand, channeled, 0 to 8 percent slopes
YbD2 Yokohl loam, 8 to 15 percent slopes, eroded
YbE3 Yokohl loam, 8 to 25 percent slopes, severely eroded
Basemap Data
Freeways/Highways
Streams
Roads
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
USDA - Soil
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 1-2 Project Vicinity 500 kV Corridor Study Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
750 375 0 750 Feet
AECOM
Figure 3-1
Soils Map
Substation &
500 kV Study Area


CaC2
CbD2
LkF3
MURRIETA ROAD
BUNDY CANYON ROAD
SCOTT ROAD
Project Location
0 0.25 0.5 1 Miles
115 kV NEPSA
Legend
Project Data
Alberhill Substation Study Area
Narrow Endemic Plant Survey Area Within 115 kV Study Area
115 kV Proposed Project
115 kV Survey Area
Proposed Single-Circuit 115 kV Subtransmission Line
115 kV Proposed Project Alternative
Alternative 115 kV Survey Area
Soils
CaC2 Cajalco fine sandy loam, 2 to 8 percent slopes, eroded
CbD2 Cajalco rocky fine sandy loam, 5 to 15 percent slopes, eroded
LkF3 Las Posas rocky loam, 15 to 50 percent slopes, severely eroded
Basemap Data
Freeways/Highways
Roads
Water Bodies
Streams
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
USDA - Soil
Projection
State Plane, California 406, NAD 83, Feet
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Figure 3-2 Soils map 115 kV NEP Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
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Feet
AECOM
Figure 3-2
Soils Map
115 kV Narrow Endemic
Plant Survey Area

3.1.3 115 kV Sub T/L Survey Area

- Las Posas rocky loam, 15 to 50 percent slopes, severely eroded

3.2 Vegetation Communities

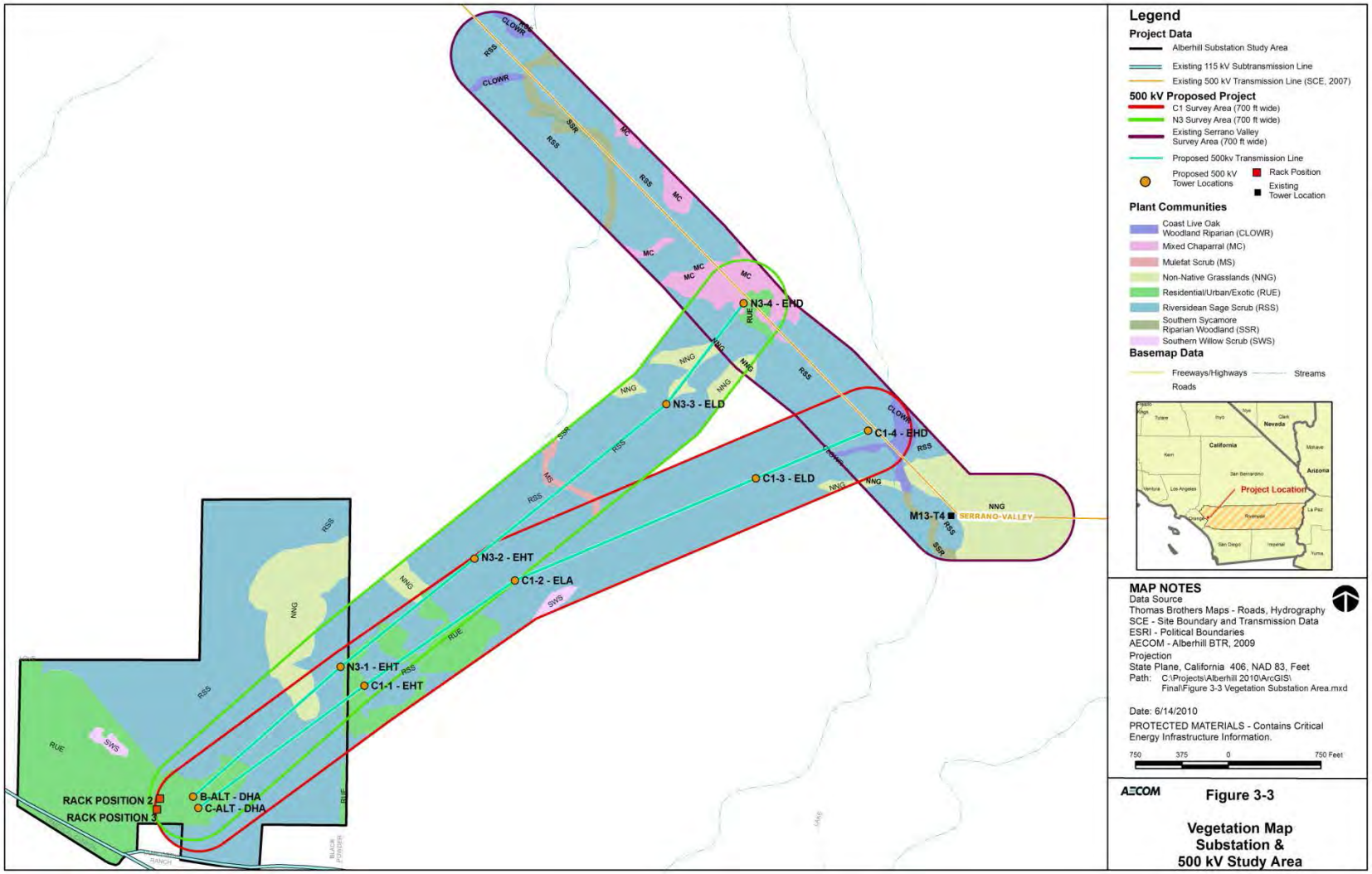
Nine vegetation communities were identified and classified by dominance of perennial species throughout the Project Area during the 2009 Biological Technical Surveys (AECOM 2009b). The vegetation community descriptions provided in this report are general and based upon *WRCMSHCP Volume II-Section C; Habitat Accounts* (Riverside County, 2003). Listed below are the WRCMSHCP descriptions for the recorded vegetation communities observed within each of the survey areas, as well as a brief description of vegetation observed within each of the vegetation communities during the 2010 surveys. See Figures 3-3 and 3-4 for vegetation community maps of each of the survey areas. A plant compendium of vascular plants observed within the Project Area components can be found in Appendix B for the substation and 500 kV and 115 kV areas.

3.2.1 Chamise Chaparral

Chamise chaparral is open to dense and between 1 to 4 meters in height, with little litter and few understory species in mature stands. Recent studies describe this association as having greater than 60 percent cover chamise (*Adenostoma fasciculatum*). Where other species occur at greater than 30 percent cover but chamise remains the dominant cover, the stands are described as a mixed series (e.g., chamise-bigberry, chamise-black sage, chamise-cupleaf ceanothus, chamise-Eastwood's manzanita, etc.). Evergreen species that commonly occur at less than 30 percent cover within chamise chaparral in the WRMSHCP area include bigberry manzanita (*Arctostaphylos glauca*), Eastwood's manzanita (*Arctostaphylos glandulosa*), mission manzanita (*Xylococcus bicolor*), scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni*), hoaryleaf ceanothus (*Ceanothus crassifolius*), our Lord's candle (*Yucca whipplei*), laurel sumac (*Malosma laurina*), sugar bush (*Rhus ovata*), toyon (*Heteromeles arbutifolia*), yerba santa (*Eriodictyon crassifolium* and *E. trichocalyx*), redberry (*Rhamnus ilicifolia*), and chaparral beard-tongue (*Keckiella antirrhinoides*).

Chamise chaparral often supports a low cover of shrubs characteristic of coastal sage scrub (e.g., black sage [*Salvia mellifera*], California buckwheat [*Eriogonum fasciculatum*], California sagebrush [*Artemisia californica*], and saw-toothed goldenbush *[Hazardia squarrosa*]). Perennial herbaceous species are few in mature stands of chamise chaparral; but cudweed (*Gnaphalium* spp.), *Sanicula* spp., southern taushia (*Tauschia arguta*), California melic (*Melica imperfecta*), lilac mariposa (*Calochortus splendens*), Bigelow's spike-moss (*Selaginella bigelovii*), and other post burn or gap specialist annuals (e.g., *Phacelia* spp., whispering bells [*Emmenanthe pendulaflora*], *Cryptantha* spp., *Plagiobothrys* spp., spineflower, evening-primrose [*Camissonia* spp.], and *Pterostegia drymarioides*) may be present.

Chamise chaparral surveyed during the 2010 sensitive plant surveys was generally found to include the following dominant woody shrub species, chamise, hoaryleaf ceanothus, and California buckwheat (*Eriogonum fasciculatum* ssp. *foliolosum*)*..* Dominant annual understory species observed within this plant community included woolly sunflower (*Eriophyllum multicaule*)*, everlasting nest straw* (*Stylocline gnaphaloides*)*,* common cryptantha (*Cryptantha intermedia*)*,* sagebrush combseed (*Pectocarya linearis*)*,* redstem filaree (*Erodium cicutarium*)*,* sapphire woollystar (*Eriastrum sapphirinum*)*,* chaparral gilia (*Gilia angelensis*)*,* and miner's lettuce (*Claytonia parviflora*)*. Common grasses observed included red brome* (*Bromus madritensis* ssp. *rubens*)*,* rat tail fescue (*Festuca myuros*)*,* and slender fescue (*Festuca octoflora*)*.*


N3-4 - EHD
N3-3 - ELD
C1-4 - EHD
C1-3 - ELD
N3-2 - EHT
C1-2 - ELA
N3-1 - EHT
C1-1 - EHT
M13-T4
SERRANO-VALLEY
RACK POSITION 2
RACK POSITION 3
B-ALT - DHA
C-ALT - DHA
CLOWR
RSS
SSR
MC
RUE
NNG
MS
SWS
Legend
Project Data
Alberhill Substation Study Area
Existing 115 kV Subtransmission Line
Existing 500 kV Transmission Line (SCE, 2007)
500 kV Proposed Project
C1 Survey Area (700 ft wide)
N3 Survey Area (700 ft wide)
Existing Serrano Valley Survey Area (700 ft wide)
Proposed 500kv Transmission Line
Proposed 500 kV Tower Locations
Rack Position
Existing Tower Location
Plant Communities
Coast Live Oak Woodland Riparian (CLOWR)
Mixed Chaparral (MC)
Mulefat Scrub (MS)
Non-Native Grasslands (NNG)
Residential/Urban/Exotic (RUE)
Riversidean Sage Scrub (RSS)
Southern Sycamore Riparian Woodland (SSR)
Southern Willow Scrub (SWS)
Basemap Data
Freeways/Highways
Streams
Roads
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
AECOM - Alberhill BTR, 2009
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 3-3 Vegetation Substation Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
750 375 0 750 Feet
AECOM
Figure 3-3
Vegetation Map
Substation &
500 kV Study Area


NNG
RUE
CC
MURRIETA ROAD
BUNDY CANYON ROAD
SCOTT ROAD
Project Location
0 0.25 0.5 1
Miles
115 kV NEPSA
Legend
Project Data
Alberhill Substation Study Area
Narrow Endemic Plant Survey Area Within 115 kV Study Area
115 kV Proposed Project
115 kV Survey Area
Proposed Single-Circuit 115 kV Subtransmission Line
115 kV Proposed Project Alternative
Alternative 115 kV Survey Area
Plant Communities
Chamise Chaparral (CC)
Non-Native Grasslands (NNG)
Residential/Urban/Exotic (RUE)
Basemap Data
Freeways/Highways
Roads
Water Bodies
Streams
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
AECOM - Alberhill BTR, 2009
Projection
State Plane, California 406, NAD 83, Feet
Path:
C:\Projects\Alberhill 2010\ArcGIS\Final\
Figure 3-4 veg map 115 kV NEP Area.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 25 50 100
Feet
AECOM
Figure 3-4
Vegetation Community Map
115 kV Narrow Endemic
Plant Survey Area

3.2.2 Coast Live Oak Woodland Riparian

Coast live oak woodland occurs on cooler, steeper slopes and will occur on terraces adjacent to the stream channels forming the interior of the woodland canopy. Coast live oak woodlands vary from savanna-like, with few to no woody associates, to dense woodlands. Coast live oak trees (*Quercus agrifolia*) can reach a canopy height of 30 meters but usually vary from 9 to 22 meters. Canopy coverage varies from continuous to open.

Understory plants in coast live oak woodland are shade tolerant. Understory composition includes wild blackberry (*Rubus ursinus*), gooseberry (*Ribes* spp.), toyon, manzanita (*Arctostaphylos* spp.), laurel sumac, and poison oak (*Toxicodendron diversilobum*). Characteristic herbaceous plants are polypody fern (*Polypodium californicum*), fiesta flower (*Pholistorma auritum*), and miner's lettuce.

Coast live oak woodland surveyed during the 2010 sensitive plant surveys was generally found to include the following dominant woody tree and shrub species, coast live oak, Mexican elderberry (*Sambucus mexicana*), laurel sumac*,* and poison oak*.* Dominant annual and perennial understory species observed within this plant community included hedge nettle (*Stachys ajugoides),* (*Pholistoma auritum*)*,* mugwort (*Artemisia douglasiana*)*,* cocklebur (*Xanthium strumarium*), watercress (*Rorippa nasturtium-aquaticum*), chickweed (*Stellaria media*), wild cucumber (*Marah macrocarpus*), annual stinging nettle (*Urtica urens*), and common monkeyflower (*Mimulus guttatus*). Common grasses observed included ripgut (*Bromus diandrus*)*.*

3.2.3 Mixed Chaparral

In the western portion of the WRMSHCP area (e.g., the Santa Ana Mountains, Agua Tibia Mountains) undifferentiated chaparral is dominated by chamise in drier habitats and by a more diverse mixture of species in more mesic areas (analogous to southern mixed chaparral, Holland 1986). Species composition ranges from that described for chamise chaparral (see above) to more diverse shrub associations supporting hoaryleaf ceanothus, toyon, sugar bush, holly-leaf redberry (*Rhamnus ilicifolia*), heart-leaved penstemon (*Keckiella cordifolia*), southern honeysuckle (*Lonicera subspicata*), scrub oak, black sage, and other species.

The central portion of the WRMSHCP area (*e.g.*, the Gavilan Hills, Sedco Hills, and Black Hills) where the 500 kV and 115 kV study areas occur, is lower in elevation and supports a drier expression of chaparral with abundant stands of chamise along with more arid climate chaparral species (e.g., jojoba [*Simmondsia chinensis*], chaparral beard-tongue, and desert thorn [*Lycium andersonii*]) and Riversidean Sage Scrub (e.g., brittlebush [*Encelia farinosa*], California buckwheat and white sage [*Salvia apiana*]). Mesic areas (e.g., north-facing slopes, narrow ravines) in this region support southern mixed chaparral or red shank chaparral.

Mixed chaparral surveyed during the 2010 sensitive plant surveys was generally found to include the following dominant woody shrub species, chamise, hoaryleaf ceanothus, black sage, deerweed (*Lotus scoparius*), California buckwheat, mountain mahogany (*Cercocarpus betuloides*), hollyleaf cherry (*Prunus ilicifoloia*), showy penstemon (*Penstemon spectabilis*), and chaparral mallow (*Malacothamnus fasciculatus*)*.* Dominant annual and perennial understory species observed within this plant community included royal goldfields (*Lasthenia coronaria*), white pincushion (*Chaenactis artemisiifolia*), California chicory (*Rafinesquia californica*), everlasting nest straw, popcornflower (*Plagiobothrys canescens*), stinging lupine (*Lupinus hirsutissimus*), annual lupine (*Lupinus bicolor*), filaree (*Erodium* sp.), chia (*Salvia columbariae*), and California sun cup (*Camissonia bistorta*).

3.2.4 Mulefat Scrub

Mulefat scrub is dominated by mulefat (*Baccharis salicifolia*), but may also include willows, sedges, and stinging nettle (*Urtica dioica*).

Mulefat scrub surveyed during the 2010 sensitive plant surveys was generally found to include the following dominant woody shrub species and annual and perennial understory species mulefat, annual burrweed (*Ambrosia acanthicarpa*), and telegraphweed (*Heterotheca grandiflora*).

3.2.5 Nonnative Grasslands

Nonnative grasslands primarily consist of annual grass species introduced from the Mediterranean basin and other Mediterranean-climate regions with variable presence of nonnative and native herbaceous species. Species composition of nonnative grasslands may vary over time and place based on grazing or fire regimes, soil disturbance, and annual precipitation patterns. Nonnative grasslands typically produce deep layers of organic matter which is inversely related to the abundance of nonnative and native forbs. Nonnative grasslands are likely to be dominated by several species of grasses, including slender oat (*Avena barbata*), wild oat (*Avena fatua*), fox tail chess (*Bromus madritensis*), soft chess (*Bromus hordeaceus*), ripgut grass, barley (*Hordeum* spp.), rye grass (*Lolium multiflorum*), English ryegrass (*Lolium perenne*), rat tail fescue, and Mediterranean schismus (*Schismus barbatus*), that have evolved to persist in concert with human agricultural practices. Nonnative grasslands also typically support an array of annual forbs from the Mediterranean climate regions (e.g., red-stemmed filaree, broad-lobed filaree [*Erodium botrys*], mustard [*Brassica* spp.], shortpod mustard [*Hirschfeldia incana*], wild radish [*Raphanus sativus*], *Centaurea* spp., Italian thistle [*Carduus pycnocephalus*], common catchfly [*Silene gallica*], *Medicago* spp., and *Hypochaeris* spp.). Low abundances of native species is sometimes observed within nonnative grasslands. Native species occurring in nonnative grasslands usually include disturbance specialists with several different growth forms: subshrubs (e.g., *Lotus* spp., *Eriogonum* spp., *Lessingia* spp., *Isocoma* spp., *Ericameria* spp.); cholla (*Opuntia* spp.); perennial geophytes (e.g., blue dicks); and herbaceous annuals (e.g., dove weed [*Eremocarpus setigerus*], vinegar weed [*Trichostemma lanceolatum*], and tarplant).

Nonnative grasslands surveyed were generally found to include the following dominant grass and annual herbaceous species, slender oat, wild oat, ripgut, red brome, rat tail fescue, foxtail barley (Hordeum murinum), redstem filaree, tocalote (Centaurea melitensis), prickly lettuce (Lactuca serriola), shortpod mustard, fiddleneck (Amsinckia intermedia), dove weed, burclover (Medicago polymorpha), horehound (Marrubium vulgare), and cheeseweed (Malva parviflora).Residential/Urban/Exotic.

Developed areas are lands that are permanently altered by human activities. These areas include roads, buildings, and associated areas where native plant communities cannot become or are prevented from becoming re-established. Developed areas include all existing facilities, access roads (paved and dirt), and actively managed areas (i.e., fire breaks and staging areas). Although these areas may at times contain vegetation, they are routinely mowed or cleared to preclude further vegetation establishment or for brush clearance, per local fire ordinance requirements. The ruderal plant community occurs in areas exhibiting a high level of disturbance, where natural colonization has favored nonnative weedy forbs (herbaceous nongrass species) and nonnative grasslands that are adapted to a regime of frequent disturbances.

The following four categories are also included as a component of this plant community: tree grove, street strip, shade tree/lawn, and shrub cover. Tree groves are in parks, green-belts, and cemeteries where a continuous or intermittent canopy is formed, and ground coverage varies (McBride and Reid 1988). Street strips and shade trees and lawns generally do not have a continuous cover and vary

widely in species and structure. These two categories are distinguished by their location. Shrub cover is the most limited vegetation type, also occurring as a variety of species and structures. A result of these largely ornamental plantings is the establishment of escaped exotics, defined as species originally planted for ornamental or agricultural purposes, which have invaded historically natural plant communities. Some commonly escaped exotic species include: acacias (*Acacia* spp.), pepper-trees (*Schinus* spp.), pampas grass (*Cortaderia* spp.), and English ivy (*Hedera helix*).

In addition to the vegetation community types listed above, many areas do not support any vegetation.

Weed communities are also common in urban areas, often occurring on roadsides and abandoned areas. In larger areas, these weed populations may represent the early stages of natural succession. Some of these areas are known as ruderal communities. A ruderal community occupies waste areas and roadsides, often on heavily compacted soils having little available oxygen. Typical species include wild oat, bromes, tocalote, mustard, pineapple-weed (*Chamomilla suaveloens*), common knotweed (*Polygonum aviculare*), sowthistle (*Sonchus oleraceus*), horseweed (*Conyza canadensis*), and goosefoot (*Chenopodium* spp.).

Residential urban and exotic areas surveyed during the 2010 sensitive plant surveys were generally found to include the following dominant woody tree and shrub species, red gum (Eucalyptus camaldulensis), sugargum (Eucalyptus cladocalyx), poplar box (Eucalyptus populnea), Canary Island pine (Pinus canariensis), Aleppo pine (Pinus halepensis), Italian stone pine (Pinus pinea), Peruvian peppertree (Schinus molle), catalpa (Catalpa sp), walnut (Juglans sp.) (cultivated), mulberry (Morus alba), and olive (Olea europaea). Dominant annual grasses annual herbaceous species observed within this plant community included ripgut, London rocket (Sisymbrium irio), horehound, pigweed amaranth (Amaranthus albus), and prickly lettuce.

3.2.6 Riversidean Sage Scrub

A majority of coastal sage scrub in Riverside County is contained in the Riversidean sub-association (Riverside County, 2003). Riversidean Sage Scrub typically is found on xeric sites, in most cases steep, south facing slopes with thin and or rocky soils (Riverside County, 2003). Sage scrub is often distributed in patches throughout its range (Riverside County, 2003). As expressed within the survey area, coastal sage scrub can be found in diverse habitat mosaics with other plant communities, particularly grassland and chaparral (Riverside County, 2003). Coastal sage scrub may convert to chaparral or grassland, depending on slope, aspect, climate, fire history, and other physical factors; conversely, chaparral or grassland areas may convert to coastal sage scrub (Riverside County, 2003).

A recent classification of sage scrub in western Riverside County has identified up to seven sub-associations based upon dominant shrub cover (Riverside County, 2003). These sub-associations include California sagebrush, California buckwheat, California sagebrush-California buckwheat, California sagebrush-white sage, brittlebush, black sage, and California broom (Riverside County, 2003).

Riversidean sage scrub surveyed during the 2010 sensitive plant surveys was generally found to include the following dominant woody shrub species, brittlebush, California sagebrush, deerweed, California buckwheat, sweetbush (*Bebbia juncea*), Palmer's goldenbush (*Ericameria palmeri*), morning glory (*Calystegia macrostegia*), laurel sumac (scattered), black sage , wishbone bush (*Mirabilis laevis*). Dominant annual and perennial understory species observed within this plant community included common tarweed (*Hemizonia fasciculata*), Kellogg's tarweed (*Hemizonia kelloggii*), fiddleneck, common cryptantha, sagebrush combseed, Cooper's popcornflower (*Plagiobothrys collinus*), filaree, spurge (*Euphorbia polycarpa*), Coulter's lupine (*Lupinus sparsiflorus*), annual lupine, common phacelia (*Phacelia distans*), and California bluebell (*Phacelia minor*). *Common*

grasses observed included ripgut. Ripgut, red brome, slender wild oat, one sided blue grass (*Poa secunda*), and California melic.

3.2.7 Southern Sycamore Riparian Forest

Below 2,000 meters in elevation, sycamores normally occur along seasonally-flooded banks with cottonwoods and willows. Poison oak, mugwort, Mexican elderberry, and wild raspberry may be present in the understory. Sycamores are able to withstand long periods of flooding.

Southern sycamore riparian forest surveyed during the 2010 sensitive plant surveys was generally found to include the following dominant woody shrub species and annual and perennial understory species sycamore (*Platanus racemosa*), poison oak, giant reed (*Arundo donax*), and mugwort.

3.2.8 Southern Willow Scrub (SWS)

Southern Willow Scrub is dominated by willow (*Salix* spp.) with gooseberry and Mexican elderberry. When disturbance is high within this habitat type, the dominant species typically is sandbar willow (*Salix exigua*). When disturbance is less, the dominance shifts to Goodding's black willow (*Salix gooddingii*). Willows are fast-growing and can reproduce vegetatively from root sprouts. Red willow (*Salix laevigata*) occupies fast-flowing perennial streams at elevations up to 1,200 meters and may occur with yellow willow (*Salix lasiandra*).

Yellow willow grows along stream channels and in perennially wet places at elevations below 2,500 meters. Sandbar willow occurs along sandbars and riverbeds at elevations below 900 meters. Arroyo willow (*Salix lasiolepis*) occupies habitat within perennial and intermittent stream channels at elevations up to 1500 meters. Goodding's black willow occurs along stream banks and in wet places within drier habitats at elevations below 450 meters.

Southern willow scrub surveyed during the 2010 sensitive plant surveys was generally found to include the following dominant woody shrub species and annual and perennial understory species Goodding's black willow, red willow, arroyo willow, mulefat, giant reed, ragweed (*Ambrosia psilostachya*), rush (*Juncus* sp.), poison oak, and willow dock (*Rumex salicifolius*).

3.3 Climate

Climate conditions within the Project Area are characterized as a semi-arid, Mediterranean-type, with hot, dry summers and a relatively wet rainy season during winter and spring. Temperatures during the summer may exceed 95°F, with August being the hottest month. Summer temperatures are usually combined with a relatively low humidity. Winter temperatures are maintained around 55°F with variable humidity, depending on the precipitation events. Precipitation is sporadic throughout the rainy season (November to May), with January usually being the wettest month.

According to the nearest weather station to the Project Area (Riverside, CA), the following are monthly temperature averages for the Lake Elsinore Area:

Table 3-1. Monthly averages for the region (Riverside, CA)

March	April	May	June
55°F	59°F	64°F	70°F

Source: www.weatherbase.com

*averages based on 59 years of data records.

The following table lists the monthly rainfall measurements during the 2009-2010 rainy season, according to the Riverside County Flood Control, Lake Elsinore Station (#67).

Table 3-2. 2009-2010 Monthly Rainfall Totals for the Project Area Based on the Lake Elsinore, CA Sampling Station #67 (Rainfall in inches)

July 2009	August 2009	September 2009	October 2009	November 2009	December 2009	January 2010	February 2010	March 2010	April 2010	May 2010	June 2010
0.02	0.05	0.05	0.14	0.03	1.33	5.15	1.43	0.08	0.76	0.02	*0.0

Source: Riverside County Flood Control, 2010
*Data collection error recorded from station 67 for 26 missing days in June 2010 (June 5-31). June 1-4, 2010 has not data associated with those days.

Riverside County Flood Control rainfall data collected from 2008-2009 in the Lake Elsinore area, the annual total rainfall for the 2008-2009 rainy season was approximately 8.00 inches (AECOM 2009). The annual total rainfall for the Lake Elsinore area for 2009-2010 was approximately 9.06 inches (Riverside County Flood Control 2010). The majority of rainfall occurred between December 2009 and February 2010 with additional light rainfall occurring in March and April of 2010.

Significant rains occurred immediately prior to the first survey period in March 2010. The majority of the rainfall during the 2009-2010 rainy season occurred between December and February, immediately prior to the germination and blooming period of most plant species. Last year's surveys resulted in fewer observations of sensitive plant species when compared with this year's results (AECOM 2009). It is highly probable that the precipitation and its distribution over the 2009-2010 rainy season was more conducive for germination of seedlings over what occurred in the 2008-2009 rainy season. In particular, a higher rainfall average in the months immediately prior to the first survey period conducted in March 2010 resulted in a higher germination rate when compared with last year's results.

4.0 Results

4.1 Survey Schedule and Environmental Conditions

Based on the target species' peak blooming periods, two survey periods were scheduled: one during early to mid spring, and the other during mid to late spring. The field survey days were:

- Survey period 1-March 29 and 31, April 1, 2, 5 through 7, 23, 26, and 27 for a total of eight survey days, and

- Survey period 2-May 17 through 21, and June 1 through 3 for a total of eight survey days.

Surveyors during the 2010 Alberhill sensitive plant surveys included: Andy Sanders, UCR Herbarium; Teresa Salvato, UCR Herbarium; Katie Kurtz, AECOM biologist; Jonas Winbolt, AECOM biologist; and Matthew Mallé, AECOM biologist. Appendix C contains a table that summarizes the number of surveyors and the hours each of the surveyors worked for each survey day. Table 4-1 below summarizes the environmental conditions recorded for each of the survey days.

Table 4-1. Environmental Conditions

Date	Time	Weather (°F)
3/29/2010	1000-1600	66/80, clear, calm winds
3/31/2010	0700-1530	60/65, overcast-foggy, calm winds. Broke to sunny, high clouds.
4/1/2010	0700-1530	50/65, overcast, calm winds
4/2/2010	0700-1530	60/70, clear, calm winds. Broke to sunny, high clouds.
4/5/2010	0700-1200	52/60, overcast, drizzle - rain, 1-3 mph wind from southeast.
4/6/2010	0700-1530	65/72, clear, calm winds
4/7/2010	0700-1530	65/77, clear, calm winds
4/23/2010	0800-1030	55/60, sunny, clear, calm winds
4/26/2010	0700-1530	70/87, sunny, clear, calm winds
4/27/2010	0800-1530	65/75, sunny, clear, calm winds
5/17/2010	0700-1530	59/67, overcast, slight breeze from northeast, 1-3 mph.
5/18/2010	0700-1530	57/65, cloud coverage 100%, Intermittent drizzle with calm winds to 3-5 mph winds from the northwest.
5/19/2010	0700-1530	65/80, slightly cloudy, calm winds
5/20/2010	0700-1530	65/84, slightly cloudy, calm winds.
5/21/2010	0600-1430	59/75, 40% cloud coverage, overcast to clear. 3-5 mph winds from east.
6/1/2010	0600-1430	60/79, sunny and clear, calm winds
6/2/2010	0600-1430	60/80, overcast to clear, calm winds.
6/3/2010	0900-1200	75, Sunny, clear, < 5% cloud coverage, 1-3 mph breeze from east.

4.2 Voucher Specimen Review

Voucher specimen review occurred on March 26, April 21, and May 11, 2010. All 22 specimens of sensitive plant species determined to have a moderate to high potential to occur within the Project Area were reviewed at the UCR herbarium.

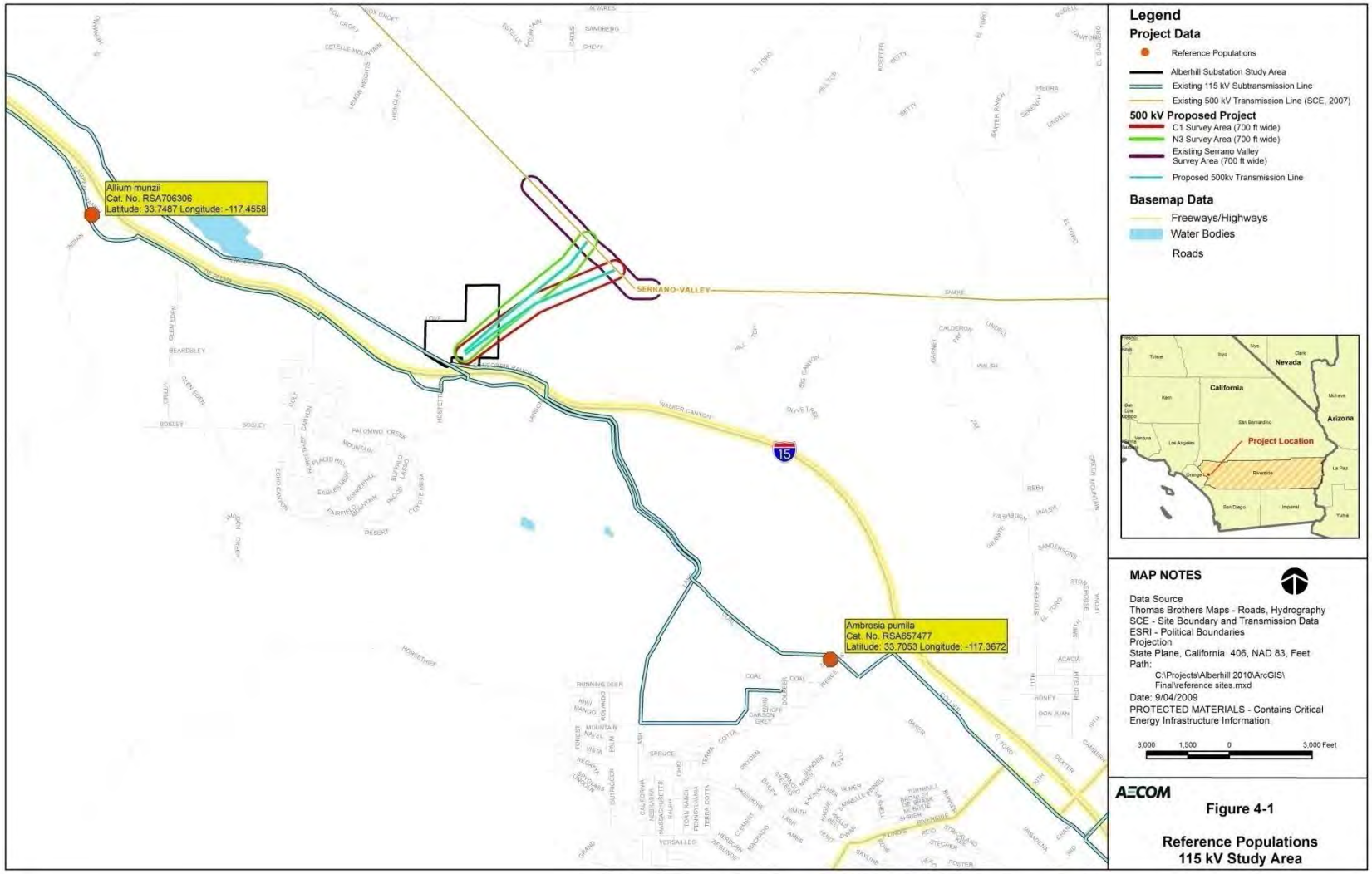
Voucher specimens reviewed include:

- Munz's onion (*Allium munzii*)
- San Diego ambrosia (*Ambrosia pumila*)
- round-leaved filaree (*California* [=*Erodium*] *macrophylum*)
- Plummer's Mariposa lily (*Calochortus plummerae*)
- intermediate Mariposa lily (*Calochortus weedii* var. *intermedius*)
- smooth tarplant (*Hemizonia [Centromadia] pungens ssp. laevis*)
- Payson's jewel flower (*Caulanthus simulans*)
- peninsular spineflower (*Chorizanthe leptotheca*)
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*)
- long-spined spineflower (*Chorizanthe polygonoides var. longispina*)
- small-flowered morning glory (*Convolvulus simulans*)
- slender-horned spineflower (*Dodecahema leptoceras*)
- many-stemmed dudleya (*Dudleya multicaulis*)
- Palmer's grappling hook (*Harpagonella palmeri)*
- paniculate tarweed (*Dienandra (Hemizonia) paniculata*)
- Robinson's peppergrass (*Lepidium virginicum* var. *robinsoni*)
- small-flowered microseris (*Microseris douglasii* var*. platycarpha*)
- white rabbit-tobacco (*Gnaphalium* [*Pseudognaphalium] leucocephalum*)
- Coulter's matilijia poppy (*Romneya coulteri*)
- southern mountain skullcap (*Scutellaria bolanderi*)
- bottle liverwort (*Sphaerocarpos drewei*)
- San Bernardino aster (*Aster bernardinus*).

See Appendix D for a table summarizing each of the target sensitive plant species' regulatory status, blooming period, and habitat preferences.

4.3 Reference Population Survey

As mentioned previously, only reference populations for federal and state listed taxa were visited. Reference populations of Munz's onion and San Diego ambrosia were located on March 29, 2010, by UCR Herbarium botanist Teresa Salvato and AECOM biologists Matthew Mallé and Katie Kurtz (See Figure 4-1). A slender-horned spineflower reference population was not located prior to conducting the 2010 Alberhill sensitive plant surveys.


Allium munzii
Cat. No. RSA706306
Latitude: 33.7487 Longitude: -117.4558
Ambrosia pumila
Cat. No. RSA657477
Latitude: 33.7053 Longitude: -117.3672
SERRANO-VALLEY
WAUER CANYON
15
Legend
Project Data
Reference Populations
Alberhill Substation Study Area
Existing 115 kV Subtransmission Line
Existing 500 kV Transmission Line (SCE, 2007)
500 kV Proposed Project
C1 Survey Area (700 ft wide)
N3 Survey Area (700 ft wide)
Existing Serrano Valley Survey Area (700 ft wide)
Proposed 500kv Transmission Line
Basemap Data
Freeways/Highways
Water Bodies
Roads
Nevada
California
Arizona
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path:
C:\Projects\Alberhill 2010\ArcGIS\Final\reference sites.mxd
Date: 9/04/2009
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
3,000 1,500 0 3,000 Feet
AECOM
Figure 4-1
Reference Populations
115 kV Study Area

4.3.1 Munz's Onion Reference Population

The Munz's onion reference population that was visited is located within the Sycamore Canyon Nature Reserve (Catalog Number RSA706306). The specific location of the Sycamore Canyon Nature Reserve can be found on the Alberhill, CA 7.5 minute USGS topographic quadrangle (1980). The Sycamore Canyon Nature Reserve site is located within the northeast ¼ of Section 12, Township 5 South, Range 6 West. The elevation of the Munz's onion reference population is approximately 1,200 feet asl.

The Munz's onion reference population was located on the northwest corner of the intersection of Campbell Ranch Road and Indian Truck Trail; approximately 2.5 miles northwest of the proposed Alberhill Substation. Two distinct populations were delineated by exclusion fencing, with individual bulbs marked with pin flags. It is suspected that the reference population was part of a monitoring program associated with a revegetation effort. Munz's onion was generally in full bloom during the reference site visit. Approximately 25 individuals were observed between the two monitoring plots. Both populations were located on a gentle, south facing slope. Soils in the area were noted to be well developed clay containing rock-cobble. Associated native species noted during the visit include: California goldfields (*Lasthenia* sp.), tidy tips (*Layia platyglossa*), blue dicks (*Dichelostemma capitatum*), California plantain (*Plantago erecta*), and amsinckia *(Amsinckia* ssp.). Associated nonnative grass and herbaceous annuals observed include red brome, soft chess, and red-stemmed filaree.

Photos of the Munz's onion reference population and surrounding habitat can be found in Appendix A.

4.3.2 San Diego Ambrosia Reference Population

The San Diego ambrosia reference population that was visited is located along Nichols Road in the Lake Elsinore Area (Catalog Number RSA657477). The specific location of the San Diego ambrosia can be found on the Lake Elsinore, CA 7.5 minute USGS topographic quadrangle (1997). The San Diego ambrosia reference population is located within the southeast ¼ of Section 26, Township 5 South, Range 5 West. The elevation of the San Diego ambrosia reference population is approximately 1,340 feet asl.

The San Diego ambrosia reference population was observed within nonnative grassland habitat in a flat area north of Nichols Road, approximately 0.5 miles west of the intersection of Nichols Road and Collier Road. The San Diego ambrosia reference population is located approximately 3.2 miles southeast of the proposed Alberhill substation. Approximately 25 individual San Diego ambrosia plants were counted during the reference site visit. All individuals encountered were vegetative (non-blooming) but were identified in spite of the lack of flowering structures by UCR Botanist Teresa Salvato. Soils were noted to be well developed clay with rock. Associated nonnative grass and herbaceous annuals observed include foxtail (*Hordeum murinum*) and red-stemmed filaree.

Photos of the San Diego ambrosia reference population and surrounding habitat can be found in Appendix A.

4.4 Sensitive Plant Species Observed On Site

Five of the nineteen species with potential to occur within the Project Area were observed during the sensitive plant surveys conducted during Spring 2010. Below is a brief description of each of the observed sensitive plant species. Appendix E contains figures of the sensitive plant species locations observed within each of the survey areas.

Photos of survey areas and select photos of key species can be found in Appendix A.

4.4.1 Parry's spineflower (*Chorizanthe parryi* var. *parryi*)

Parry's spineflower is generally spreading to erect, from 0.5 to 4 cm in height. The stem is hairy, and leaf blades are 1 to 3 cm long and 0.4 to 0.8 cm wide. Inflorescence is characterized by generally 2 bracts and a whorl of 3 to 5 at the middle. The awns are straight and 1 to 3 mm long. The involucres awns are hooked. The 6 teeth are 1 to 2 mm long, the axial is long with awns from 0.5 to 1 mm. One flower is present and is 2.5 to 3mm wide and hairy, and the perianth is 2-colored with the floral tube green-white. The lobes are white, with the outer petal generally fringed, and the inner petal narrower and entire or toothed. Stamens are 9. The species is found in sand, from 90 to 800 m asl within the eastern Transverse Ranges and northwest edge of the Sonoran Desert. Blooming period is from May to June (Hickman, J.C. Ed. 1993, [online interchange 2010]).

4.4.2 Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)

Long-spined spineflower (CNPS listed 1B.2) is generally a small, inconspicuous annual herb. The stem is prostrate, 1 to 15 cm, generally greenish or reddish in color, and soft to hairy. The leaf blade is usually 3 to 10 mm and thinly hairy. The inflorescence is bell-shaped, 3-angled, often reddish, and thinly hairy with prominent bracts. This particular variety's involucre (including awns) length is generally 3 to 4 mm, the tube is 1.5 to 2 mm, and its bracts sometimes only 3 mm, usually at a length of 2 to 3 mm including awns. This species is generally associated with chaparral habitat within the Peninsular Ranges (Hickman, J.C. Ed. 1993).

4.4.3 Paniculate tarweed (Deinandra [=Hemizonia] paniculata)

Paniculate tarweed (CNPS listed 4.2) is a small annual, 10 to 80 cm tall. It is generally bristly below and glandular above. The basal leaves are linear to oblanceolate (1 to 10 cm,), deeply toothed or lobed; upper leaves are linear and entire. Inflorescence heads are solitary, long-peduncled; involucres are generally 5 to 7 mm; and phyllaries are densely glandular. There are usually 8 to 13 ray flowers; each ligule 3.5 to 6 mm, and the color a deep yellow. There are usually 8 to 13 disk flowers, fertile or staminate, with yellow corollas and black anthers. The fruits of this species are usually 2.5 to 3 mm long and are beaked. This species is generally associated with dry foothills and mesas, within the South Coast and Southwest Peninsular Ranges (Hickman, J.C. Ed. 1993).

4.4.4 Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*)

Robinson's peppergrass (CNPS listed 1B.2) is an herbaceous annual defined by erect, pointed stems; usually 4-20 cm tall. Dense hairs are persistent on the stem, and leaves are cauline, divided, or lobed, with narrow segments, 1 to 2 mm wide. The inflorescence is described as a more or less flat pedicel, generally winged with hairs. The species is observed within dry soils, in scrub communities (characterized by *Encelia* sp.). Its elevation range is less than 500 m asl, and it is found throughout southwest California.

4.4.5 Coulter's Matilija poppy (Romneya coulteri)

Coulter's Matilija poppy (CNPS listed 4.2) is a subshrub-shrub in size, approximately 100 to 250 cm in height. The root system is composed of creeping rhizomes with a colorless sap. Leaves are cauline, gray-green-glaucus, with 3 to 5 deep lobes. Leaf shape is lanceolate to ovate. The flower size is the largest of any California plant. Buds are erect, with 3 sepals, 6 petals that are free, ovate, crinkled, white, and shed after fruiting. Many stamens are present and are free, and ovary chambers number 1 to 12. No style is present, and stigma lobes are 7 to 12. The fruits are oblong to ovate, dehiscent from the top, and bristly. The fruit size is 3 to 4 cm. Seeds are papillate and dark brown. The species

is found within dry canyon washes, below 1200 m asl. Blooming period is from March through July (Hickman, J.C. Ed. 1993, [online interchange 2010]).

4.5 Summary of Sensitive Plant Observations within Each of the Survey Areas

Five CNPS listed plant species were observed during Spring 2010 surveys within the proposed Project Areas. Discussed below are the observed sensitive plant species and a brief synopsis for the type of habitat where the species were found.

Tables 4-2 thru 4-4 are summary tables of the sensitive plant species observed within each of the survey areas. Each table provides the type and number of individual sensitive plant species recorded, the sensitive plant population identifier (directly linked to the figures of sensitive plant species locations and Native Sensitive Species Survey Forms found in Appendix E and F respectively), the coordinates used to define each sensitive plant population encountered, and a general description of the sensitive plant or plant population location in relation to each of the survey area project components and associated buffers.

Appendix F contains the completed California Native Species Survey Forms for each of the observed sensitive plant populations.

4.5.1 Substation

Three sensitive plant species (Robinson's peppergrass, long-spined spineflower, and paniculate tarplant) were observed on the proposed Alberhill Substation site.

One small population of Robinson's peppergrass was recorded on a steep, south facing slope above the existing developed portion of the site. Robinson's peppergrass was associated with rocky soils in areas between bushes in open stages of Riversidean Sage Scrub habitat.

Long-spined spineflower populations in the Alberhill Substation survey area are generally associated with previously disturbed habitat within Riversidean Sage Scrub. The long-spined spineflower was generally observed within clay-based soils and minimal vegetation.

Likewise, paniculate tarweed was noted to be located within disturbed habitat in a livestock grazing pen at the southeast corner of the Alberhill Substation survey area. The paniculate tarweed occupies a localized region along the hills within scattered drainage patterns.

Table 4-2 summarizes the observation of sensitive plant species within the Alberhill Substation survey area.

Table 4-2. Summary of Sensitive Plant Observations on the Alberhill Substation Site

Number of Individual Plants Observed/Population Identifier	Coordinates	General Location
Chorizanthe polygonoides* var. *longispina		
650/ 05-ChorPol_040510	33.738592°, -117.410569°; 33.738608°, -117.410483°; 33.738594°, -117.410422°; 33.738631°, -117.410367°; 33.738625°, -117.410333°; 33.738622°, -117.410289°; 33.738619°, -117.410239°; 33.738628°, -117.410086°; 33.738779°, -117.409964°; 33.738783°, -117.409891°; 33.738659°, -117.409944°; 33.738633°, -117.409808°; 33.738652°, -117.409636°; 33.738662°, -117.409447°; 33.738499°, -117.409539°; 33.738517°, -117.409692°; 33.738491°, -117.409958°; 33.738597°, -117.410011°	Along existing dirt road and within shallow clay lenses within sage scrub habitat at southern terminal end of the proposed access road to Tower N3-2.
Deinandra (=Hemizonia) paniculata		
1,700/ 12-HemPan-051910	33.735830°, -117.409522°; 33.735877°, -117.409271°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 and N3 alignment buffer.
1,200/ 13-HemPan-060110	33.736049°, -117.409013°; 33.736005°, -117.409228°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 and N3 alignment buffer.
320/ 14-HemPan-060110	33.735557°, -117.409509°; 33.735584°, -117.409415°; 33.735625°, -117.409340°; 33.735555°, -117.409145°; 33.735447°, -117.409291°; 33.735524°, -117.409362°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 and N3 alignment buffer.
17/ 15-HemPan-060110	33.735682°, -117.409798°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 and N3 alignment buffer

Table 4-2. Summary of Sensitive Plant Observations on the Alberhill Substation Site

Number of Individual Plants Observed/Population Identifier	Coordinates	General Location
420/ 16-HemPan-060110	33.735451°, -117.409708°; 33.735383°, -117.409863°; 33.735314°, -117.409721°; 33.735194°, -117.409640°; 33.735135°, -117.409563°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 and N3 alignment buffer
75/ 17-HemPan-060110	33.736033°, -117.408114°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 alignment buffer
14/ 18-HemPan-060110	33.735100°, -117.408226°	Population occurs within the southeast portion of the Alberhill Substation site.
660/ 20-HemPan-060110	33.736064°, -117.408757°; 33.735912°, -117.408727°; 33.735880°, -117.408662°; 33.735842°, -117.408650°; 33.735788°, -117.408674°; 33.735776°, -117.408752°; 33.735640°, -117.408863°; 33.735481°, -117.408824°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 and N3 alignment buffer
16/ 21-HemPan-060110	33.735637°, -117.408560°	Population occurs within the southeast portion of the Alberhill Substation site. Also within the overlap of the southern end of the C1 alignment buffer
Lepidium virginicum* var. *robisonii		
5/ 01-LepVir_040110	33.736873°, -117.411443°	Approximately 500 feet northeast and upslope of the already developed portions of the proposed substation site.

4.5.2 500 kV T/L Survey Area

Four sensitive plant species (Robinson's peppergrass, long-spined spineflower, Parry's spineflower, and Coulter's Matilija poppy) were observed within the 500 kV T/L survey area.

As in the case with the substation site, Robinson's peppergrass was generally observed along 30 to 40 percent, undisturbed slopes within open spaces between shrubs. Soils at most locations supporting Robinson's peppergrass were rocky, and some of the observed populations were associated with rock outcrops.

The long-spined spineflower and Parry's spineflower were generally observed within previously disturbed areas having compacted clay-based soils and minimal vegetation.

One population of Coulter's Matilija poppy was observed along the extreme southeast edge of the southern C1 survey area. This population is confined to the incised banks of a riparian area.

Table 4-3 summarizes the observations of sensitive plant species within the 500 kV T/L Survey Area.

Table 4-3. Summary of Sensitive Plant Observations within the 500 kV T/L Survey Area.

Number of Individual Plants Observed/Population Identification	Coordinates	General Location
Chorizanthe polygonoides* var. *longispina		
28/ 03-ChorPol_040510	33.738425°, -117.404775°; 33.738481°, -117.404486°; 33.738458°, -117.404161°; 33.738733°, -117.404086°	Along existing dirt road, within southern 1/3 portion of the C1 alignment buffer, approximately 750 feet northeast of Tower C1-1
70 02-ChorPol_040510	33.737408°, -117.406336°; 33.737678°, -117.405683°; 33.737513°, -117.406160°; 33.737620°, -117.405536°; 33.737426°, -117.405939°; 33.737392°, -117.406180°; 33.737228°, -117.406148°; 33.737273°, -117.406419°	On a previously graded pad and adjacent southwest facing slope; approximately 220 feet southeast of Tower C1-1.
78/ 04-ChorPol_040510	33.738103°, -117.406847°; 33.738075°, -117.406811°; 33.737939°, -117.406789°; 33.737911°, -117.406792°; 33.737842°, -117.406875°; 33.737867°, -117.406428°; 33.737913°, -117.406409°	Along remnant dirt road and within upland swale area adjacent to (northwest to southeast) Tower C1-1.
50/ 11-ChorPol-052110	33.737528°, -117.409683°; 33.737547°, -117.409730°	Population occurs within thin the southern end of the N3 alignment buffer.
Chorizanthe parryi* var. *parryi		
260/ 24-ChorPar-051710	33.744328°, -117.391738°; 33.744273°, -117.391415°; 33.744307°, -117.391415°; 33.744321°, -117.391332°	Population occurs within and adjacent to the northern portion of the pull location associated with the C1 alignment
Lepidium virginicum* var. *robinsonii		
55/ 06-LepVir_040610	33.743964°, -117.399600°; 33.743956°, -117.399481°	Population occurs within the N3 alignment, approximately 270 feet southwest of Tower N3-3.

Table 4-3. Summary of Sensitive Plant Observations within the 500 kV T/L Survey Area.

Number of Individual Plants Observed/Population Identification	Coordinates	General Location
500/ 07-LepVir_040610	33.742711°, -117.395683°	Population occurs on a ridgeline, approximately 200 feet east of Tower C1-3
75/ 08-LepVir_040710	33.741939°, -117.391762°; 33.741861°, -117.391731°	Population occurs approximately 150 west of existing tower (M13-T4) location along the Serrano-Valley alignment.
300/ 09-LepVir-040710	33.743035°, -117.393696°; 33.743027°, -117.393049°	Population occurs within the C1 alignment buffer, in the northeast end, approximately 180 feet south of Tower C1-4
10/ 22-LepVir-040610	33.743703°, -117.393075°	Population occurs approximately 100 feet southeast of tower C1-4.
200/ 23-LepVir-051710	33.744094°, -117.390967°	Population occurs approximately 190 feet southeast of the pull location associated with the C1 alignment.
300/ 27-LipVir-051710	33.744011°, -117.393117°	Population occurs approximately 120 feet northeast of tower C1-4.
1/ 28-LepVir-051810	33.743111°, -117.405220°	Plant occurs approximately 2/10 of a mile northwest of Tower N3-2. Plant was observed outside the survey area.
Romneya coulteri		
500/ 10-RoCo-051810	33.739315°, -117.402377°; 33.739519°, -117.402338°	Along the northern bank of an upland swale within and adjacent to the C1 alignment buffer southern boundary. Approximately 350 feet southeast of Tower C1-2.

4.5.3 115 kV Sub T/L Survey Area

One sensitive plant species, Parry's spineflower was observed within the 115 kV NEPSA. Observations of Parry's spineflower in the 115 kV Sub T/L survey area were within open spaces between chamise in dense chaparral habitat. Soils within the 115 kV Sub T/L survey area are comprised of decomposed granite and compacted clay soils.

Table 4-4 summarizes the observations of this species within the 115 kV NEPSA.

Table 4-4. Summary of Sensitive Plant Observations within the 115 kV Sub T/L Survey Area.

Number of Individual Plants Observed/Population Identification	Coordinates	General Location
Chorizanthe parryi var. parryi		
10/ 19-ChorPar-060210	33.641135°, -117.206431°	Population occurs along the western boundary of the 115 kV NEPSA, approximately 130 feet south of Bundy Canyon Road (southern shoulder).
500/ 26-ChorPar-042310	N33 38.472, W117 12.399	Population occurs west of (~50 feet) the 115 kV NEPSA western boundary; approximately 100 feet south of Bundy Canyon Road (southern shoulder).

4.6 Voucher Sensitive Plant Species

Four voucher specimens of sensitive plant species were collected during the 2010 sensitive plant surveys. Species collected include Parry's spineflower, Robinson's peppergrass, and Coulter's Matilija poppy.

Table 4-5 summarizes the voucher specimens collected during the 2010 Sensitive Plant Species Surveys and provides the UCR Herbarium Collection Number for reference.

Table 4-5. Summary of Voucher Sensitive Plant Species Collected

Species	Collector	UCR Herbarium Collection Number
Parry's spineflower	Andy Sanders	38379 (500 kV T/L Survey Area) 38012 (115 kV NEPSA)
Robinson's peppergrass	Andy Sanders	38383 (500 kV T/L Survey Area)
Coulter's Matilja poppy	Andy Sanders	38409 (500 kV T/L Survey Area)

5.0 Discussion

The geographic distributions of plant species are determined by many factors. While history, geographic barriers, and isolations all influence the distribution of species, the ultimate determinant of where a taxon can be found is its inherited tolerance to environmental factors (Kruckeburg and Rabinowitz 1985). Robinson's peppergrass, long-spined spineflower, Parry's spineflower, and paniculate tarweed are considered edaphic sensitive plant species, often associated with open clay soils. Edaphic endemics may tolerate the unfavorable conditions where they typically occur, while they are excluded from more hospitable habitat due to competitive interactions with other species (McGraw and Levin, 1998). Soil requirements, shade intolerance, susceptibility to soil pathogens and low genetic diversity has been suggested as the root cause of the poor competitive abilities hypothesized for edaphic endemics (McGraw and Levin, 1998).

Robinson's peppergrass was not detected during the 2009 sensitive plant surveys but was identified in the 2009 sensitive plant species report as a species that had a moderate potential to occur. Morphological similarities between Robinson's peppergrass and the common peppergrass, Lepidium nitidum, both observed during the 2010 sensitive plant surveys, make it difficult to distinguish between the two and could explain why Robinson's peppergrass was not detected during the 2009 surveys. Additionally, even with ideal environmental conditions for the 2009/2010 blooming season, this species was detected in only a small portion of the substation survey area and scattered in isolated populations in the 500 kV survey area.

Long-spined spineflower, Parry's spineflower, and paniculate tarweed were often associated with generally barren areas caused by temporary impacts due to previous mechanical (e.g., graded area, abandoned road) or grazing-related disturbances. The occurrences of these three sensitive plant species within the disturbed open habitats could suggest that these species are unable to compete for light, which could explain their restriction to monospecific stands or open areas within the Project Area (McGraw and Levin, 1998).

Both long-spined spineflower and paniculate tarweed populations (2010) on the Alberhill Substation study area were previously recorded within the same regional area during the 2009 sensitive plant surveys. Each of the previously recorded populations was determined to be more extensive during the 2010 sensitive plant survey when qualitatively compared to the 2009 survey results (AECOM 2009).

Both Robinson's peppergrass and Coulter's Matilija poppy were generally observed within undisturbed habitats, with Robinson's peppergrass preferring the open spaces between Riversidean Sage Scrub, and Coulter's Matilija poppy associated with the banks of upland drainages. Undetermined environmental factors are responsible for these species growing within the observed areas as opposed to unoccupied similar habitat within the Project Area.

6.0 Potential Impacts

This section provides a general discussion of potential for indirect and direct impacts to sensitive plant populations observed during the 2010 sensitive plant survey. The potential for impact is based on a comparison of the relative location of sensitive plant populations recorded during the 2010 sensitive plant surveys and the proposed location of the Alberhill System Project components.

6.1 Alberhill Substation Survey Area

The single detection of Robinson's peppergrass during the 2010 sensitive plant survey within the Alberhill Substation survey area was found outside the area of anticipated direct impact. The area of potential direct impact from the proposed Alberhill Substation is generally developed and disturbed;, Robinson's peppergrass is not expected to occur in generally developed and disturbed areas, therefore impacts to this species are not anticipated.

All populations of long-spined spineflower and paniculate tarweed within the Alberhill Substation survey area are outside the area of anticipated direct impact. In addition, the area of anticipated direct impact associated with the proposed Alberhill Substation is generally developed and continually disturbed; therefore, neither sensitive plant species is expected to occur within the area of anticipated direct impact.

6.2 500 kV T/L Survey Area

Populations of Robinson's peppergrass are likely to be threatened due to Project activities associated with the 500 kV Project components. Population of this sensitive plant species that are subject to direct and indirect impacts are those observed adjacent to the proposed locations for towers N3-3 and C1-1, as well as those seen in areas adjacent to the anticipated pull location associated with the C1 T/L.

Populations of long-spined spineflower and Parry's spineflower are likely to be threatened due to Project activities associated with the proposed 500 kV Project components. Population of these sensitive plant species that are subject to direct and indirect impacts are those observed adjacent to and within the proposed footprint of Tower C1-1, as well as those in areas adjacent to the anticipated pull location associated with the C1 T/L.

Impacts to the one Coulter's Matilija poppy population are not anticipated because it occurs outside the area of anticipated impact associated with the adjacent Tower C1-2.

6.3 115 kV Sub T/L Survey Area

Both populations of Parry's spineflower occur south of Bundy Canyon Road, across the street from the area of anticipated direct impact. Because Project activities are not anticipated within the NEPSA identified in the 115 kV Sub T/L survey area, impacts to Parry's spineflower are not anticipated.

7.0 Recommendations

AECOM recommends that a management strategy aimed at the maintenance of open areas in the Riversidean Sage Scrub habitats and within upland drainage areas in the Project Area be developed to reduce impacts to the sensitive plant species populations that have highest potential for impacts due to Project implementation.

The following discussion provides recommended avoidance and minimization measures based on potential impacts from construction-related activities on sensitive plant populations and native plant communities. The following measures are intended to avoid and minimize impacts to sensitive plant populations and native plant communities as much as feasible. These measures shall be reviewed by the regulatory agencies (i.e., USFWS, CDFG) prior to the start of construction.

7.1 Avoidance and Minimization Measures

The following avoidance and minimization measures are recommended to reduce impacts to sensitive plant species occurring within or adjacent to the proposed Project site during construction-related activities:

- A pre-construction survey should be conducted of all previously identified populations of sensitive plants located adjacent to construction-related activities (within a 100-foot buffer area) to identify areas for avoidance. The pre-construction survey shall be conducted in accordance with the guidelines issued by the regulatory agencies (USFWS and CDFG) and CNPS.

- Construction-related activities (grading, construction, ingress/egress, etc.) should be avoided within areas known to contain sensitive plant populations. Once identified, an Environmentally Sensitive Area (ESA) should be established around identified sensitive plant populations through installation of high visibility exclusion fencing. The locations of all ESAs should be shown on construction drawings and should contain clear language which prohibits construction-related activities in these areas.

- Construction-related dust control measures should be enforced in order to reduce impacts to sensitive plant species from dust accumulation. Dust control measures should include, at a minimum, enforcement of a 20-mile-per-hour (mph) speed limit within the Project Area and applying water to keep fugitive dust to a minimum.

- Construction-related activities (e.g., parking of construction vehicles, laydown areas, etc.) should be restricted as much as possible to already developed, disturbed, or low quality habitat areas (e.g., use of Nonnative Grassland areas).

7.2 Recommended Mitigation Measures

The avoidance and minimization measures described above are intended to reduce adverse impacts to sensitive plant populations and native plant communities. However, if adverse impacts are deemed unavoidable during construction-related activities, the following recommended measures are intended to mitigate for these direct and indirect impacts.

- A Habitat Restoration and Revegetation Plan (HRRP) should be prepared and implemented that includes restoration plans, enhancement/re-vegetation and/or mitigation banking options and details for a 1- to 5-year monitoring and maintenance effort. Prior to the start of construction, all sensitive plant communities and sensitive plant populations should be documented, and areas subject to disturbance should be calculated in acres.

    - Loss of on-site native plant communities could be mitigated by allocating remaining onsite native plant communities as a conservation easement. In addition, these onsite conservation easements could be improved by removing debris and controlling public access and could include the implementation of a habitat management plan.

- A Weed Management Plan (WMP) for potential spread of nonnative invasive species (weeds) due to construction-related activities should be prepared and implemented. The WMP should include, at a minimum, weed control treatments and pre-construction and construction-related measures to control the introduction and spread of nonnative species in the Project Area.

    - An invasive exotic plant management policy should be adopted and implemented as part of the WMP. The goals of the policy should include stopping further introductions of nonnative plant species into natural plant communities found on site, implementing exotic plant control measures in such a manner that native species and natural systems are not adversely impacted, and setting aside funding to adequately control the spread of invasive exotic species within less disturbed areas of the overall Project Area.

- A Worker Environmental Awareness Program (WEAP) should be implemented for all construction personnel by the Project biologist and biological monitor(s) prior to the start of construction-related activities. Training materials should include discussion of federal and state ESAs, the consequences of non-compliance with these regulations, and how to identify the sensitive plant species of concern. Participation in the WEAP would be a requirement prior to construction personnel being allowed to work in the field.

- A Project biologist and biological monitor(s) approved by SCE prior to the start of construction would oversee compliance with the HRRP, WMP, and WEAP training. The Project biologist and biological monitor(s) would have the authority to stop work that may result in the loss of sensitive plant species and/or non-compliance with measures contained in the HRRP and/or WMP.

- The biological monitor(s) would be onsite during construction-related activities that have the potential to impact known populations of sensitive plant species. The biological monitor(s) are required to be familiar with the sensitive plant species discussed in the HRRP, WMP, and WEAP training and would be able to perform pre-construction surveys to identify additional sensitive plant populations, if required.

    - Biological monitor(s) would be responsible for collecting data that would be submitted to SCE on a weekly basis for the duration of construction-related activities. Data collected would include, at a minimum, information on sensitive plant species observed and impacted, detection of nonnative species populations, and aspects of construction-related activities that may have impacts on sensitive plant populations.

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Appendix A
Photos

Appendix A-1
Reference Site Photographs
for Sensitive Plant Species



Photo 1. Munz's onion (*Allium munzii*) reference site located near the southeast corner of Campbell Ranch Road and Indian Truck Trail to the west of Interstate-15. Aspect northeast. March 29, 2010.



Photo 2. Munz's onion (*Allium munzii*) reference site located near the southeast corner of Campbell Ranch Road and Indian Truck Trail to the west of Interstate-15. Aspect northeast. March 29, 2010.



Photo 3. View of Munz's onion (*Allium munzii*), reference site located near the corner of Campbell Ranch Road and Indian Truck Trail to the west of Interstate-15. March 29, 2010



Photo 4. San Diego ambrosia (*Ambrosia pumila*) reference site located north of Nichols Road, approximately 0.5 miles west of the Nichols Road and Collier Road intersection. Aspect northeast. March 29, 2010.



Photo 5. View of San Diego ambrosia (*Ambrosia pumila*), reference site located north of Nichols Road, approximately 0.5 miles west of the Nichols Road and Collier Road intersection. March 29, 2010.

Appendix A-2
Photographs of Proposed Alberhill Substation Survey Area



Photo 1. Paniculate tarplant (*Dienandra* [*Hemizonia*] *paniculata*) observed in the southeast corner of the proposed Alberhill Substation survey area, north of Concordia Ranch Road. June 4, 2010.



Photo 2. Paniculate tarplant (*Dienandra* [*Hemizonia*] *paniculata*) population in background observed in Nonnative Grassland within the southeast corner of the proposed Alberhill Substation survey area, north of Concordia Ranch Road. Aspect west. June 4, 2010.



Photo 3. Paniculate tarplant (*Dienandra* [*Hemizonia*] *paniculata*) population observed in upland swale within Nonnative Grassland, north of Concordia Ranch Road. Aspect southwest. May 29, 2010.



Photo 4. Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) observed in the northern portion of the proposed Alberhill Substation survey area. May 29, 2010.



Photo 5. Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) habitat observed in Nonnative Grassland within the southeast corner of the proposed Alberhill Substation survey area. Aspect northeast. May 29, 2010.



Photo 6. Nonnative Grassland. Central portion of the proposed Alberhill Substation survey area. Aspect south. May 29, 2010.



Photo 7. Nonnative Grassland. Southeast corner of the proposed Alberhill Substation survey area. Aspect west. May 29, 2010.



Photo 8. Nonnative Grassland. View of the livestock pen in the right hand corner, within the proposed Alberhill Substation survey area. Aspect southeast. April 8, 2010.



Photo 9. Nonnative Grassland. View of the southeast portion of the proposed Alberhill Substation survey area. Aspect north. April 4, 2010.



Photo 10. Riversidean Sage Scrub. Drainage feature visible in left-hand foreground. View of the northeast portion of the proposed Alberhill Substation survey area. Aspect east. April 8, 2010.

Appendix A-3
Photographs of Proposed 500kV Transmission Line Survey Area



Photo 1. Coulter's matilija poppy (*Romneya coulteri*). Observed within the southeastern portion of the proposed C1Transmission Line survey area. June 4, 2010.



Photo 2. Coulter's matilija poppy (*Romneya coulteri*) was observed adjacent to Southern Willow Scrub in the western portion of the proposed 500kV Transmission Line survey area. Aspect east. June 4, 2010.



Photo 3. Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*) was observed within the northern portion of the proposed N3 Transmission Line survey area. April 6, 2010.

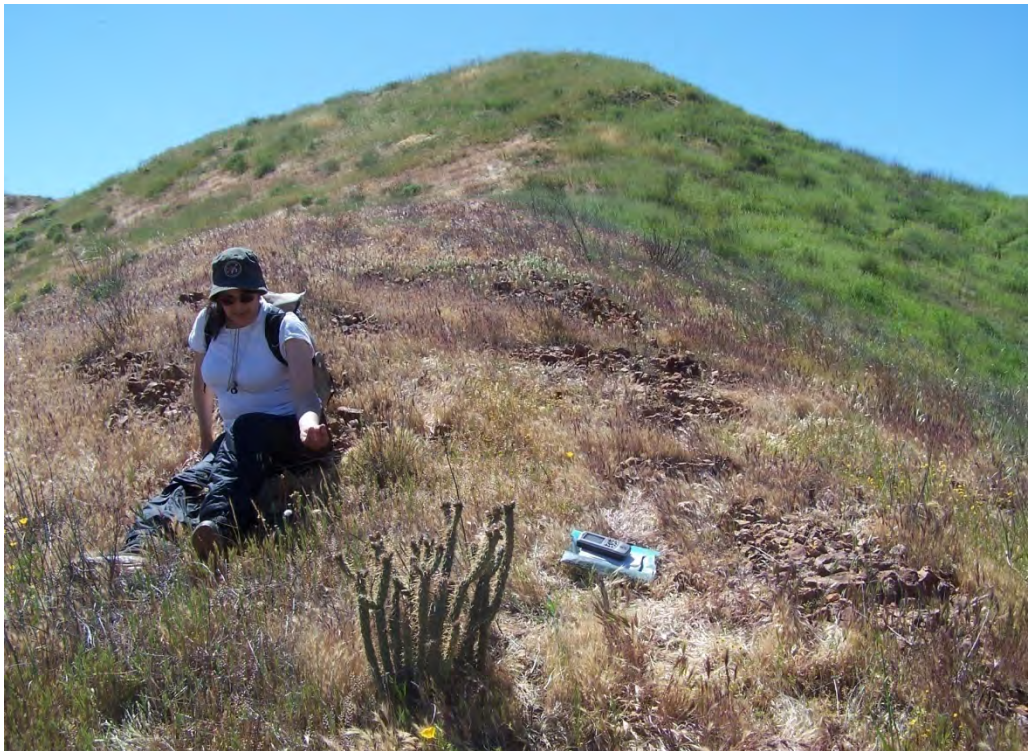


Photo 4. Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*) habitat observed in Riversidean Sage Scrub (Nonnative Grassland in background) within the northern portion of the proposed N3Transmission Line survey area. Aspect south. April 6, 2010.



Photo 5. Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) was observed in the southern portion of the proposed C1 survey area. May 18, 2010.



Photo 6. Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) habitat that was observed in northern portion of the Alberhill Substation survey area. May 18, 2010.



Photo 7. Parry's spineflower (*Chorizanthe parryi* var. *parryi*) was observed within a proposed pulling site associated with the northern portion of the C1 survey area. May 29, 2010.



Photo 8. Parry's spineflower (*Chorizanthe parryi* var. *parryi*) habitat adjacent to proposed pulling site associated with the northern portion of the C1 survey area. May 29, 2010.



Photo 9. Coast Live Oak Woodland Riparian/Mulefat Scrub observed within the northern portion of the proposed C1 survey area. April 8, 2010.



Photo 10. Coast Live Oak Woodland Riparian visible in background, Riversidean Sage Scrub visible in foreground. Observed within the existing Serrano-Valley Transmission Line survey area. Aspect northwest. April 6, 2010.



Photo 11. Mixed Chaparral observed within the northern portion of the proposed N3 survey area. Aspect northeast. April 8, 2010.

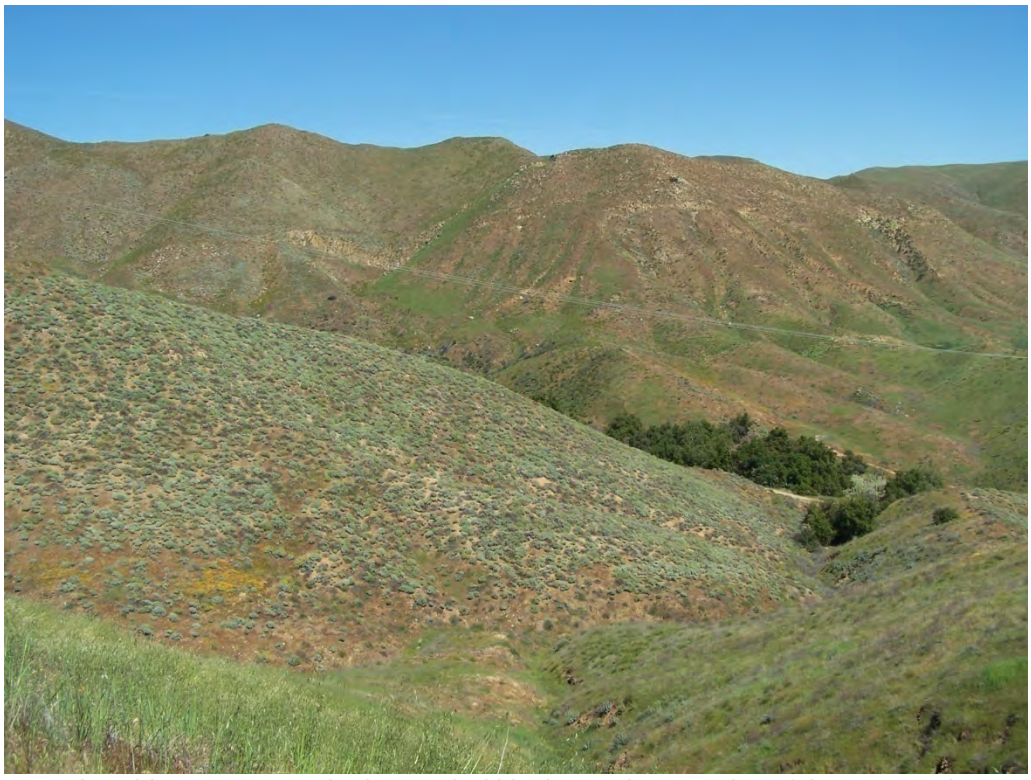


Photo 12. Riversidean Sage Scrub observed within the northern portion of the proposed N3 survey area. Aspect southwest. April 6, 2010.



Photo 13. Proposed tower location C1-1, aspect east. April 7, 2010.



Photo 14. Proposed tower location C1-2, aspect southeast. April 7, 2010.



Photo 15. Proposed tower location C1-3, aspect east. April 6, 2010.



Photo 16. Proposed tower location C1-4, aspect north. April 6, 2010.



Photo 17. Proposed tower location N3-1, aspect south. April 7, 2010.



Photo 18. Proposed tower location N3-2, aspect south. April 5, 2010.



Photo 19. Proposed tower location N3-3 in background on ridgeline, aspect south. April 6, 2010



Photo 20. Proposed tower location N3-4, aspect southwest. April 6, 2010



Photo 21. Proposed location of B and C Alt DHA within a livestock pen on the Alberhill Substation survey area, aspect south. April 7, 2010



Photo 22. Proposed Tensioning Rack 2 and 3 locations within a livestock pen on the Alberhill Substation survey area, aspect east. April 7, 2010

Appendix A-4
Proposed 115kV Transmission Line Survey Area



Photo 1. Parry's spineflower (*Chorizanthe parryi* var. *parryi*) observed within the proposed 115kV Transmission Line survey area. April 23, 2010.



Photo 2. Chamise Chaparral within the proposed 115kV Transmission Line survey area. Aspect northwest. April 23, 2010.



Photo 3. Chamise Chaparral observed within the proposed 115kV Transmission Line survey area. Aspect northwest. April 23, 2010.



Photo 4. Chamise Chaparral observed within the proposed 115kV Transmission Line survey area. Aspect east. April 23, 2010.



Photo 5. Chamise Chaparral in background, Nonnative Grassland in foreground, observed within the proposed 115kV Transmission Line survey area. Aspect east. April 23, 2010.

Appendix B
Plant Compendiums

Appendix B-1
Proposed Substation Survey Area and
Proposed 500kV Transmission Line Survey Area
Plant Compendium

Family Name	Full Scientific Name with Authors	Local Habit
Pteridaceae		
	Cheilanthes newberryi (D.C. Eat.) Domin.	perennial
	Pellaea andromedifolia (Kaulf.) Fée	perennial
	Pellaea mucronata (D.C. Eat.) D.C. Eat.	perennial
	Pityrogramma triangularis (Kaulfuss) Maxon	perennial
Selaginellaceae		
	Selaginella bigelovii Underw.	perennial
Cupressaceae		
	Juniperus californica Carr.	shrub
Pinaceae		
	Pinus canariensis C. Sm.*	tree (cultivated)
	Pinus halepensis Mill.*	tree (cultivated)
	Pinus pinea L.*	tree (cultivated)
Adoxaceae		
	Sambucus mexicana Presl.	shrub/tree
Amaranthaceae		
	Amaranthus albus L.*	annual
	Amaranthus blitoides S. Wats.	annual
Anacardiaceae		
	Rhus laurina Nutt. (=*Malosma laurina*)	shrub
	Schinus molle L.*	tree (cultivated)
	Toxicodendron diversilobum (Torr. & Gray) Greene	shrub/liana
Apiaceae		
	Apiastrum angustifolium Nutt.	annual
	Bowlesia incana Ruiz & Pavon	annual
	Daucus pusillus Michx.	annual
	Lomatium dasycarpum (Torr. & Gray) Coult. & Rose	perennial
	Sanicula arguta Greene ex C. & R.	perennial
	Sanicula bipinnatifida Dougl. ex Hook.	perennial
Asclepiadaceae		
	Sarcostemma cynanchoides Dcne.	perennial vine
Asteraceae		
	Acourtia microcephala DC.	perennial
	Ambrosia acanthicarpa Hook.	annual
	Ambrosia psilostachya DC.	perennial
	Artemisia californica Less.	shrub
	Artemisia douglasiana Bess.	perennial
	Artemisia dracunculus L.	perennial
	Baccharis salicifolia (Ruiz & Pavón) Pers.	shrub
	Bebbia juncea (Benth.) Greene var. *aspera* Greene	shrub
	Brickellia desertorum Coville	shrub
	Centaurea melitensis L.*	annual
	Chaenactis artemisiifolia (Harv. & Gray ex Gray) Gray	annual
	Chaenactis glabriuscula DC.	annual
	Cirsium vulgare (Savi) Ten.	annual
	Conyza canadensis (L.) Cronq.	annual
	Cotula australis (Sieber) Hook. f.*	annual
	Encelia farinosa Gray ex Torr. var. *farinosa*	shrub
	Ericameria palmeri (Gray) Hall var. *pachylepis* (Hall) Nesom	shrub
	Erigeron foliosus Nutt.	perennial

Family Name	Full Scientific Name with Authors	Local Habit
	Eriophyllum confertiflorum (DC.) Gray	subshrub
	Filago californica Nutt.	annual
	Filago gallica L.*	annual
	Gnaphalium bicolor Biol.	perennial
	Gnaphalium californicum DC.	biennial
	Gutierrezia californica (DC.) T. & G.	subshrub
	Hedypnois cretica (L.) Dum.-Cours.*	annual
	Helianthus annuus L.*	annual
	Helianthus gracilentus Gray	perennial
	Hemizonia fasciculata (DC.) Torr. & Gray	annual
	Hemizonia kelloggii Greene	annual
	Hemizonia paniculata Gray	annual
	Heterotheca grandiflora Nutt.	biennial
	Hypochaeris glabra L.*	annual
	Lactuca serriola L.*	annual
	Lasthenia coronaria (Nutt.) Ornd.	annual
	Lasthenia gracilis (DC.) Greene	annual
	Layia platyglossa (Fisch. & Mey.) Gray	annual
	Lessingia filaginifolia (H. & A.) M.A. Lane	perennial
	Malacothrix saxatilis (Nutt.) T. & G.	perennial
	Matricaria matricarioides (Less.) Porter (=*Chamomilla suaveolens*)*	annual
	Microseris heterocarpa (Nutt.) Chamb.	annual
	Microseris lindleyi (DC.) Gray (=*Uropappus lindleyi*)	annual
	Rafinesquia californica Nutt.	annual
	Senecio vulgaris L.*	annual
	Silybum marianum (L.) Gaertn.*	biennial
	Solidago californica Nutt.	perennial
	Sonchus asper (L.) Hill*	annual
	Sonchus oleraceus L.*	annual
	Stephanomeria exigua Nutt. ssp. *deanei* (J.F. Macbr.) Gottlieb	annual
	Stephanomeria virgata Benth. ?	annual
	Stylocline gnaphaloides Nutt.	annual
	Tetradymia comosa Gray	shrub
	Xanthium strumarium L.	annual
Bignoniaceae		
	Catalpa spp.*	tree (cultivated)
Boraginaceae		
	Amsinckia intermedia Fisch. & Mey. (=*Amsinckia menziesii intermedia*)	annual
	Amsinckia retrorsa Suksd. (=*Amsinkia menziesii menziesii*, in Jeps. Man.)	annual
	Amsinckia tessellata Gray	annual
	Cryptantha corollata (I.M. Johnston) I.M. Johnston	annual
	Cryptantha intermedia (Gray) Greene	annual
	Cryptantha microstachys (Greene ex Gray) Greene	annual
	Pectocarya linearis (R. & P.) DC.	annual
	Pectocarya penicillata (H. & A.) A. DC.	annual
	Pectocarya recurvata Jtn.	annual
	Plagiobothrys canescens Benth.	annual
	Plagiobothrys collinus (Phil.) Jtn.	annual

Family Name	Full Scientific Name with Authors	Local Habit
Brassicaceae		
	Brassica geniculata (Desf.) Ball (=*Hirschfeldia incana*)*	annual/perennial
	Brassica rapa L.*	annual
	Brassica tournefortii Gouan.*	annual
	Capsella bursa-pastoris (L.) Medik.*	annual
	Coronopus didymus (L.) Sm.*	annual
	Lepidium nitidum Nutt.	annual
	Lepidium virginicum L. var. *robinsonii* (Thell.) C. Hitchc.	annual
	Rorippa nasturtium-aquaticum (L.) Hayek*	perennial
	Sisymbrium irio L.*	annual
	Sisymbrium orientale L.*	annual
	Thysanocarpus curvipes Hook.	annual
	Thysanocarpus laciniatus Nutt.	annual
Cactaceae		
	Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth (=*Opuntia parryi*)	succulent shrub
	Opuntia littoralis (Engelm.) Cockerell	succulent shrub
Caryophyllaceae		
	Cerastium glomeratum Thuill.*	annual
	Loeflingia squarrosa Nutt.	annual
	Silene antirrhina L.	annual
	Spergularia rubra (L.) J. Presl. & C. Presl.*	annual
	Stellaria media (L.) Villars*	annual
Chenopodiaceae		
	Atriplex suberecta I. Verd.*	annual
	Chenopodium berlandieri Moq.	annual
	Chenopodium murale L.*	perennial
	Salsola tragus L.*	annual
Convolvulaceae		
	Calystegia macrostegia (Greene) Brummitt ssp. *arida* (Greene) Brummitt	perennial vine
	Cuscuta californica Hook. & Arn.	annual vine
Crassulaceae		
	Crassula connata (R. & P.) Berger	annual
	Dudleya lanceolata (Nutt.) Britt. & Rose	perennial
	Dudleya pulverulenta (Nutt.) Britt. & Rose	succulent perennial
Cuscutaceae		
	Cucurbita foetidissima Kunth	perennial vine
	Cucurbita palmata S. Wats.	perennial vine
	Marah macrocarpus (Greene) Greene	perennial vine
Euphorbiaceae		
	Croton californicus Muell.-Arg.	perennial
	Croton setiger Hook. (=*Eremocarpus s.*)	annual
	Euphorbia albomarginata T. & G. (=*Chamaesyce a.*)	perennial
	Euphorbia polycarpa Benth. (=*Chamaesyce p.*)	perennial
	Ricinus communis L.*	shrub (weak)
Fabaceae		
	Astragalus gambelianus Sheldon	annual
	Lotus hamatus Greene	annual
	Lotus heermannii (Dur. & Hilg.) Greene	perennial
	Lotus humistratus Greene	annual

Family Name	Full Scientific Name with Authors	Local Habit
	Lotus salsuginosus Greene	annual
	Lotus scoparius (Nutt.) Ottley var. *brevialatus* Ottley	subshrub
	Lotus strigosus (Nutt.) Greene	annual
	Lupinus bicolor Lindl.	annual
	Lupinus concinnus Agardh.	annual
	Lupinus excubitus M.E. Jones	perennial
	Lupinus hirsutissimus Benth.	annual
	Lupinus sparsiflorus Benth.	annual
	Lupinus truncatus H. & A.	annual
	Medicago polymorpha L.*	annual
	Melilotus albus Medikus *	annual
	Melilotus indicus (L.) All.*	annual
	Parkinsonia aculeata L.*	tree (cultivated)
	Trifolium obtusiflorum Hook. f.	annual
	Trifolium willdenovii Spreng.	annual
Fagaceae		
	Quercus agrifolia Née	tree
	Quercus berberidifolia Liebm.	shrub
	Quercus virginiana P. Mill.*	tree (cultivated)
Geraniaceae		
	Erodium botrys (Cav.) Bertol.*	annual
	Erodium cicutarium (L.) L'Her. ex Ait.*	annual
	Erodium moschatum (L.) L'Her. ex Ait.*	annual
Hydrophyllaceae	*Emmenanthe penduliflora* Benth.	annual
	Eucrypta chrysanthemifolia (Benth.) Greene	annual
	Nemophila menziesii H. & A.	annual
	Phacelia campanularia Gray	annual
	Phacelia cicutaria Greene var. *hispida* (Gray) J.T. Howell	annual
	Phacelia distans Benth.	annual
	Phacelia minor (Harv.) Thell.	annual
	Pholistoma auritum (Lindl.) Lilja	annual
Juglandaceae	*Juglans hindsii* X regia*	tree (cultivated)
	Juglans regia L.*	tree (cultivated)
Lamiaceae	*Marrubium vulgare* L.*	perennial
	Salvia apiana Jeps.	shrub
	Salvia columbariae Benth.	annual
	Salvia mellifera Greene	shrub
	Stachys ajugoides Benth. ?	perennial
	Trichostema lanceolatum Benth.	annual
Malvaceae	*Malacothamnus fasciculatus* (Nutt.) Greene	shrub
	Malva parviflora L.*	annual
Moraceae	*Ficus carica* L.*	shrub/tree
	Morus alba L.*	tree (cultivated)
Myrtaceae	*Eucalyptus camaldulensis* Dehnh.*	tree (cultivated)
	Eucalyptus cladocalyx F. Muell.*	tree (cultivated)
	Eucalyptus populnea F. Muell.*	tree (cultivated)
Nyctaginaceae		
	Mirabilis laevis (Benth.) Curran	perennial
Oleaceae		
	Olea europaea L.*	tree (cultivated)

Family Name	Full Scientific Name with Authors	Local Habit
Onagraceae		
	Camissonia bistorta (Nutt. ex T. & G.) Raven	annual
	Camissonia californica (Nutt. ex T. & G.) Raven	annual
	Camissonia ignota (Jepson) Raven	annual
	Clarkia epilobioides (Nutt. ex T. & G.) Nels. & Macbr.	annual
	Clarkia purpurea (Curt.) A. Nels. & Macbr.	annual
	Epilobium ciliatum Raf.	annual/perennial
Papaveraceae		
	Eschscholzia californica Cham.	perennial/annual
	Platystemon californicus Benth.	annual
	Romneya coulteri Harv.	perennial
Plantaginaceae		
	Plantago erecta Morris	annual
Platanaceae		
	Platanus racemosa Nutt.	tree
Polemoniaceae		
	Allophyllum spp.	annual
	*Eriastrum sapphirinum (*Eastw.) Mason	annual
	Gilia angelensis V. Grant	annual
	Linanthus parviflorus (Benth.) Greene	annual
Polygonaceae		
	Chorizanthe coriacea Goodm.	annual
	Chorizanthe parryi S. Wats. var. *parryi*	annual
	Chorizanthe polygonoides var. *longispina* (Goodman) Munz	annual
	Eriogonum elongatum Benth.	perennial
	Eriogonum fasciculatum Benth. var. *foliolosum* (Nutt.) S. Stokes ex Abrams	shrub
	Eriogonum fasciculatum Benth. var. *polifolium* (A. DC.) T. & G.	shrub
	Eriogonum gracile Benth.	annual
	Polygonum aviculare L.*	annual
	Pterostegia drymarioides F. & M.	annual
	Rumex crispus L.*	perennial
	Rumex hymenosepalus Torr.	perennial
	Rumex salicifolius Weinm.	perennial
Portulacaceae		
	Calandrinia ciliata (R. & P.) DC.	annual
	Claytonia parviflora Dougl. ex Hook.	annual
	Claytonia perfoliata Donn ex Willd.	annual
Proteaceae		
	Grevillea robusta A. Cunningham ex R. Br.*	tree (cultivated)
Punicaceae		
	Punica granatum L.*	shrub
Ranunculaceae		
	Clematis pauciflora Nutt.	liana
	Delphinium parryi Gray	perennial
Rhamnaceae		
	Ceanothus crassifolius Torr.	shrub
	Rhamnus crocea Nutt.	shrub
	Ziziphus jujuba (L.) Lam.*	tree (persisting from cultivation)

Family Name	Full Scientific Name with Authors	Local Habit
Rosaceae		
	Adenostoma fasciculatum H. & A.	shrub
	Cercocarpus betuloides Torr. & A. Gray	shrub
	Prunus ilicifolia (Nutt.) Walp.	shrub
Rubiaceae		
	Galium angustifolium Nutt. ex Gray	perennial
	Galium aparine L.*	annual
Salicaceae		
	Populus fremontii S. Wats.	tree
	Salix gooddingii Ball.	tree
	Salix laevigata Bebb	tree
	Salix lasiolepis Benth.	shrub
Scrophulariaceae		
	Antirrhinum coulterianum Benth.	annual
	Antirrhinum nuttallianum Benth.	perennial
	Castilleja affinis H. & A.	perennial
	Castilleja exserta (Heller) Chuang & Heckard	annual
	Collinsia concolor Greene	annual
	Keckiella antirrhinoides (Benth.) Straw	shrub
	Mimulus aurantiacus Curtis var. *puniceus* (Nutt.) D. Thompson	shrub
	Mimulus brevipes Benth.	annual
	Mimulus cardinalis Benth.	perennial
	Mimulus guttatus DC.	perennial
	Penstemon spectabilis Thurb. ex Gray	perennial
Solanaceae		
	Datura wrightii Regel	perennial
	Lycium andersonii Gray	shrub
	Nicotiana glauca Grah.*	shrub
	Nicotiana quadrivalvis Pursh	annual
	Solanum douglasii Dunal	perennial
	Solanum esculentum L.*	annual/perennial
	Solanum umbelliferum Eschsch.	perennial
Tamaricaceae		
	Tamarix ramosissima Ledeb.*	shrub
Urticaceae		
	Parietaria hespera B. D. Hinton	annual
	Urtica dioica L.	perennial
	Urtica urens L.*	annual
Agavaceae		
	Yucca whipplei Torr.	perennial
Arecaceae		
	Washingtonia robusta H. A. Wendl.*	tree (cultivated)
Cyperaceae		
	Cyperus eragrostis Lam.	perennial
	Scirpus acutus Bigel. ?	perennial
Juncaceae		
	Juncus bufonius L.	annual
	Juncus macrophyllus Cov. ?	perennial
	Juncus textilis Buch.	perennial
	Juncus xiphioides E. Meyer	perennial

Family Name	Full Scientific Name with Authors	Local Habit
Liliaceae		
	Allium haematochiton S. Wats.	perennial
	Bloomeria crocea (Torr.) Coville	perennial
	Calochortus splendens Dougl. ex Benth.	perennial
	Calochortus weedii Wood var. *weedii*	perennial
	Dichelostemma capitatum (Benth.) Alph. Wood	perennial
	Muilla maritima (Torr.) S. Wats.	perennial
Poaceae		
	Arundo donax L.*	perennial
	Avena barbata Brot.*	annual
	Avena fatua L.*	annual
	Avena sativa L.*	annual
	Bromus diandrus Roth*	annual
	Bromus hordeaceus L.*	annual
	Bromus rubens L. (=*Bromus madritensis rubens*)*	annual
	Bromus tectorum L.*	annual
	Bromus trinii Desv.	annual
	Cynodon dactylon (L.) Pers.*	perennial
	Distichlis spicata (L.) Greene	perennial
	Elymus condensatus Presl (=*Leymus condensatus*)	perennial
	Elymus glaucus Buckl.	perennial
	Festuca microstachys Nutt. var. *pauciflora* Scribn. ex Beal	annual
	Festuca myuros L.*	annual
	Festuca octoflora Walt.	annual
	Hordeum murinum L.*	annual
	Lamarckia aurea (L.) Moench*	annual
	Melica frutescens Scribn.	perennial
	Melica frutescens X *imperfecta*	perennial
	Melica imperfecta Trin.	perennial
	Muhlenbergia microsperma (DC.) Kunth.	annual
	Phalaris minor Retz.*	annual
	Poa annua L.*	annual
	Poa secunda Presl.	perennial
	Polypogon monspeliensis (L.) Desf.*	annual
	Schismus barbatus (L.) Thell.*	annual
	Stipa lepida Hitchc. (=*Nassella lepida*)	perennial
	Stipa pulchra Hitchc. (=*Nassella pulchra*)	perennial
Typhaceae		
	Typha spp.	perennial
*=nonnative species		

Appendix B-2
Proposed 115kV Transmission Line Survey Area
Plant Compendium

Family Name	Full Scientific Name with Authors	Local habit
Asteraceae		
	Centaurea melitensis L.*	annual
	Erigeron foliosus Nutt.	perennial
	Eriophyllum confertiflorum (DC.) Gray	subshrub
	Eriophyllum multicaule (DC.) Gray	annual
	Filago californica Nutt.	annual
	Filago gallica L.*	annual
	Gnaphalium bicolor Biol.	perennial
	Gnaphalium californicum DC.	biennial
	Gnaphalium stramineum Kunth.	annual
	Helianthus gracilentus Gray	perennial
	Hemizonia paniculata Gray	annual
	Hypochaeris glabra L.*	annual
	Lasthenia coronaria (Nutt.) Ornd.	annual
	Lasthenia gracilis (DC.) Greene (=*L. californica*)	annual
	Lessingia filaginifolia (H. & A.) M.A. Lane	perennial
	Microseris lindleyi (DC.) Gray (=*Uropappus l.)*	annual
	Rafinesquia californica Nutt.	annual
	Senecio vulgaris L.*	annual
	Stephanomeria exigua Nutt.	annual (all either seedlings or old skeletons)
	Stylocline gnaphaloides Nutt.	annual
Boraginaceae		
	Amsinckia intermedia Fisch. & Mey.	annual
	Amsinckia retrorsa Suksd. ?	annual
	Cryptantha corollata (I.M. Johnston) I.M. Johnston ?	annual
	Cryptantha intermedia (Gray) Greene	annual
	Cryptantha microstachys (Greene ex Gray) Greene	annual
	Pectocarya linearis (R. & P.) DC.	annual
	Pectocarya penicillata (H. & A.) A. DC.	annual
	Plagiobothrys canescens Benth.	annual
	Plagiobothrys collinus (Phil.) Jtn.	annual
Brassicaceae		
	Brassica geniculata (Desf.) Ball (=*Hirschfeldia incana*)*	annual/perennial
	Sisymbrium altissimum L.*	annual
	Thysanocarpus curvipes Hook.	annual
	Tropidocarpum gracile Hook.	annual
Campanulaceae		
	Nemacladus ramosissimus Nutt.	annual
Caryophyllaceae		
	Loeflingia squarrosa Nutt.	annual
Crassulaceae		
	Crassula connata (R. & P.) Berger	annual
Cuscutaceae		
	Marah macrocarpus (Greene) Greene	perennial vine

Fabaceae		
	Lotus scoparius (Nutt.) Ottley ssp. *brevialatus* (Ottley) Munz	subshrub
Geraniaceae		
	Erodium botrys (Cav.) Bertol. ?*	annual
	Erodium cicutarium (L.) L'Her. ex Ait.*	annual
Hydrophyllaceae	*Eucrypta chrysanthemifolia* (Benth.) Greene	annual
	Phacelia cicutaria Greene var. *hispida* (Gray) J.T. Howell	annual
Lamiaceae		
	Salvia columbariae Benth.	annual
	Salvia mellifera Greene	shrub
Onagraceae		
	Camissonia hirtella (Greene) Raven	annual
Polemoniaceae		
	Eriastrum sapphirinum (Eastw.) Mason	annual
	Gilia angelensis V. Grant	annual
	Navarretia atractyloides (Benth.) H. & A.	annual
Polygonaceae	*Chorizanthe fimbriata* Nutt.	annual
	Chorizanthe parryi S. Wats. var. *parryi*	annual (one colony of c. 500)
	Eriogonum fasciculatum Benth. ssp. *foliolosum* (Nutt.) Abrams	shrub
	Eriogonum gracile Benth.	annual
	Pterostegia drymarioides F. & M.	annual
Portulaceae		
	Claytonia parviflora Dougl. ex Hook.	annual
Rhamnaceae		
	Ceanothus crassifolius Torr.	shrub
Rosaceae		
	Adenostoma fasciculatum H. & A.	shrub
Liliaceae		
	Dichelostemma capitatum (Benth.) Alph. Wood	perennial
Poaceae	*Avena barbata* Brot.*	annual
	Avena fatua L.*	annual
	Bromus diandrus Roth*	annual
	Bromus hordeaceus L.*	annual
	Bromus madritensis L. ssp. *rubens* (L.) Husnot*	annual
	Festuca microstachys Nutt. var. *pauciflora* Scribn. ex Beal (=*Vulpia m*.)	annual
	Festuca myuros L.* (=*Vulpia m*.)	annual
	Festuca octoflora Walt. (=*Vulpia o*.)	annual
	Schismus barbatus (L.) Thell.*	annual
*=nonnative species		

Appendix C
Summary of Survey Hours

Table C-1. March-April 2010 Sensitive Plant Survey, Summary of Survey Hours (Proposed Alberhill Substation Survey Area and Proposed 500kV Transmission Line Survey Area)

Date	Surveyors	Time
3/29/2010	Teresa Salvato Matt Mallé Katie Kurtz	1000-1600 hrs
3/31/2010	Andy Sanders Teresa Salvato Matt Mallé Katie Kurtz Jonas Winbolt	0700-1530 hrs
4/1/2010	Teresa Salvato Matt Mallé Katie Kurtz Jonas Winbolt	0700-1530 hrs
4/2/2010	Andy Sanders Teresa Salvato Matt Mallé Katie Kurtz Jonas Winbolt	0700-1530 hrs
4/5/2010	Teresa Salvato Matt Mallé Katie Kurtz Jonas Winbolt	0700-1200 hrs
4/6/2010	Teresa Salvato Matt Mallé Katie Kurtz Jonas Winbolt	0700-1530 hrs
4/7/2010	Andy Sanders Teresa Salvato Matt Mallé Katie Kurtz Jonas Winbolt	0700-1530 hrs
4/26/2010	Matt Mallé Katie Kurtz Jonas Winbolt	0700-1530 hrs
4/27/2010	Matt Mallé Katie Kurtz Jonas Winbolt	0800-1530 hrs

Table C-2. March-April 2010 Sensitive Plant Survey, Summary of Survey Hours (Proposed 115kV Transmission Line Survey Area)

Date	Surveyors	Time
4/23/2010	Andy Sanders Matt Mallé	0800-1030 hrs

Table C-3. May-June 2010 Sensitive Plant Survey, Summary of Survey Hours (Proposed Alberhill Substation Survey Area and Proposed 500kV Transmission Line Survey Area)

Date	Surveyors	Time
5/17/2010	Andy Sanders Teresa Salvato Matt Mallé Jonas Winbolt	0700-1530 hrs
5/18/2010	Andy Sanders Teresa Salvato Matt Mallé Jonas Winbolt	0700-1530 hrs
5/19/2010	Teresa Salvato Matt Mallé Jonas Winbolt	0700-1530 hrs
5/20/2010	Teresa Salvato Matt Mallé Jonas Winbolt	0700-1530 hrs
5/21/2010	Teresa Salvato Matt Mallé Jonas Winbolt	0600-1430 hrs
6/1/2010	Teresa Salvato Matt Mallé Jonas Winbolt	0600-1430 hrs
6/2/2010	Teresa Salvato Matt Mallé Jonas Winbolt	0600-1430 hrs

Table C-4. May-June 2010 Sensitive Plant Survey, Summary of Survey Hours (Proposed 115kV Transmission Line Survey Area)

Date	Surveyors	Time
6/3/2010	Teresa Salvato Matt Mallé	0900-1200 hrs

Appendix D
Sensitive Plant Species Tables

Appendix D-1
Target Sensitive Plant Species
Blooming Between March and April

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Allium munzii Munz's onion	FE/ST CNPS 1B.1	X	X	X	March-May	RSS/NNG/MC/ CC	X		Occurs in clay soils (within Western Riverside County unit Bosanko clay soils and Las Posas gravelly loam) within mesic sites in grassy openings within scrublands or woodlands. 297-1070 meters.
Ambrosia pumila San Diego ambrosia	FE CNPS 1B.1		X		April-Oct	RSS/MC/NNC/ CC/AS	X		Occurs in upland areas on clay slopes or dry margins of vernal pools. Often associated with open, gently-sloped grasslands, and generally found in alkaline soils. 20-415 meters.
Caulanthus simulans Payson's jewel flower	CNPS 4.2	X	X	X	Feb-June	RSS/MC/CC			Occurs in frequently burned areas or in other disturbed sites such as streambeds within chaparral and coastal scrub habitats.
Chorizanthe parryi var. *parryi* Parry's spineflower	CNPS 1B.1	X	X	X	April-June	RSS/NNG/CC/ MC			Occurs in coastal sage scrub and chaparral. Found on dry slopes and flats within dry sandy soils. 275-1220 meters.
Chorizanthe polygonoides var. *longspina* long-spined spineflower	CNPS 1B.2	X	X	X	April-July	RSS/NNG/MC/ CC			Occurs in clay soils within openings in chaparral, coastal scrub, meadows, valley/foothill grasslands. 30-1530 meters.
Convolvulus simulans small-flowered morning glory	CNPS 4.2		X	X	March-July	CC/MC/RSS/ NNG			Occurs within chaparral, sage scrub, and valley/foothill grassland habitat. Has an affinity to serpentine soil and associated seeps. 30-700 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Deinandra paniculata paniculate tarplant	CNPS 4.2		X	X	April-Nov	RSS/NNG			Occurs within dry foothills and mesas in sage scrub valley/foothill grasslands and non-native grasslands. Often associated with disturbed sites within these habitat types.
Dodecahema leptoceras slender-horned spineflower	FE/SE CNPS 1B.1		X	X	April-June	RSS/MC/CC/AS	X		Occurs within chaparral, sage scrub habitats. Flood deposited terraces and washes. Associations include *Encelia*, *Dalea*, *Lepidospartum*. 200-760 meters.
Dudleya multicaulis many-stemmed dudleya	CNPS 1B.2	X	X	X	April-July	RSS/NNG/MC/ CC	X		Occurs in heavy clay soils or grassy slopes in barrens, rocky places, and ridgelines chaparral, sage scrub and, valley/foothill grasslands. 15-790 meters.
Erodium (California) macrophyllum round-leaved filaree	CNPS 1B.1	X	X	X	March-May	NNG		X	Occurs in grasslands with relatively low cover of annual grasses on friable/clay soils. 15-1200 meters.
Harpagonella palmeri Palmer's grapplinghook	CNPS 4.2	X	X	X	March-May	RSS/NNG/MC/ CC			Occurs within openings in chaparral, sage scrub, and valley/foothill grassland habitats. Often associated with clay soils. 20-955 meters.
Lepidium virginicum var. *robinsonii* Robinson's pepper grass	CNPS 1B.2	X	X	X	Jan-July	RSS/MC/CC			Occurs within chaparral, coastal scrub. Often associated with dry soils. 1-885 meters.
Microseris douglasii var. *platycarpha*	CNPS 4.2		X	X	March-May	RSS/NNG			Occurs within cismontane woodland, sage scrub, valley and foothill grassland

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
small-flowered microseris									and vernal pool habitats. Often associated with clay soils. 15-1070 meters.
Romneya coulteri Coulter's Matilija poppy	CNPS 4.2		X	X	March-July	CC/MC/RSS			Occurs within chaparral and sage scrub habitats. Often found within these plant communities after burns.
Sphaerocarpos drewei bottle liverwort	CNPS 1B.1	X	X	X	-	CC/MC/RSS			Occurs within openings on soil in chaparral and sage scrub habitats. 90-600 meters.

Definitions:

Plant Communities:

AS	Alluvial Scrub
CC	Chamise Chaparral
MC	Mixed Chaparral
NNG	Nonnative Grassland
RSS	Riversidean Sage Scrub

Status Codes:

FE	Federally Endangered
FT	Federally Threatened
SE	State Endangered
ST	State Threatened

CNPS Status Codes:

List 1A	Presumed extinct in California
List 2	Presumed extinct in California, but more common elsewhere
List 3	We need more information about this plant
List 4	Limited distribution (watch list)
.1	Seriously endangered in CA (over 80% of occurrences threatened/high degree and immediacy of threat)
.2	Fairly endangered in CA (20-80% occurrences threatened)
.3	Not very endangered in CA (<20% of occurrences threatened or no current threats known)

Appendix D-2
Target Sensitive Plant Species
Blooming Between March and June

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Calochortus plummerae Plummer's Mariposa Lily	FSS CNPS 1B.2	X	X	X	May-July	RSS/NNG/CC/ MC			Occurs on rocky or sandy sites, usually of granitic or alluvial material within sage scrub, Chaparral, valley foothill grassland, cismontane woodland and lower montane coniferous forest. Can be very common after a fire. 100-1700 meters.
Calochortus weedii var. *intermedius* intermediate Mariposa lily	CNPS 1B.2	X	X	X	May-July	RSS/NNG/MC/ CC			Occurs on rocky or sandy sites within sage scrub, chaparral, and valley/foothill grassland habitats. 105-855 meters.
Centromadia pungens ssp. *laevis* smooth tarplant	CNPS 1B.1		X		April-Sept	CAM/NNG/RUE/ SWS/MS/RS/TS/ CWR/SSR		X	Occurs in alkali meadow or alkali scrub within valley and foothill grasslands, meadows, playas or riparian woodland. 0-480 meters.
Chorizanthe leptotheca peninsular spineflower	CNPS 4.2		X	X	May-Aug	CC/MC/RSS			Occurs within chaparral, coastal scrub, and lower montane coniferous forest. 300-1900 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Pseudognaphalium leucocephalum white rabbit-tobacco	CNPS 2.2		X	X	July-Dec	CC/MC/RSS/ SWS/MS/RS/TS/CWR/SSR			Occurs within chaparral, cismontane woodland, sage scrub, and riparian woodlands. Usually associated with sandy or gravelly substrates. 0-2100 meters.
Scutellaria bolanderi ssp. *austromontana* Southern Mountain skullcap	CNPS 1B.2			X	June-Aug	CC/MC/CLOWR/CLOWU			Occurs within chaparral, cismontane woodland, lower montane coniferous forests. Found in gravelly soils on streambeds or in mesic sites in oak or pine woodland. 425-2000 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Symphyotrichum defoliatum San Bernardino aster	CNPS 1B.2	X			July-Nov	RSS/VFM/CAM/ NNG/SWS/MS/ RS/TS/CWR/SSR			Occurs within meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, grassland habitat. Found in vernally mesic grasslands or near ditches, streams, springs, and disturbed areas within 2-2040 meters.

Definitions:

Plant Communities:

CAM	Cismontane Alkali Marsh
CC	Chamise Chaparral
CLOWR	Coast Live-Oak Woodland-Riparian
CLOWU	Coast Live-Oak Woodland-Upland
CWR	Southern Cottonwood/Willow Riparian Forest
MC	Mixed Chaparral
MS	Mulefat Scrub
NNG	Nonnative Grassland
RS	Riparian Scrub
RSS	Riversidean Sage Scrub
RUE	Rural/Urban/Exotic
SSR	Southern Sycamore Riparian Woodland
SWS	Southern Willow Scrub
TS	Tamarisk Scrub
VFM	Valley Freshwater Marsh

CNPS Status Codes:

List 1A	Presumed extinct in California
List 2	Presumed extinct in California, but more common elsewhere
List 3	We need more information about this plant
List 4	Limited distribution (watch list)
.1	Seriously endangered in CA (over 80% of occurrences threatened/high degree and immediacy of threat)
.2	Fairly endangered in CA (20-80% occurrences threatened)
.3	Not very endangered in CA (<20% of occurrences threatened or no current threats known)

Status Codes:

FE	Federally Endangered
FT	Federally Threatened
SE	State Endangered
ST	State Threatened

Appendix D-3
Plant Species with Low to No Potential for Occurrence

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Abronia villosa var. *aurita* chaparral sand-verbena	CNPS 1B.1		X	X	Jan-Sept	AS/CC/RSS			Occurs within sandy soils and is associated with washes within chaparral and sage scrub plant communities. 80-1600 meters.
Allium marvinii Yucaipa onion	FSS CNPS 1B.1		X	X	April-May	CC/MC	X		Occurs in openings within chaparral plant communities. Often associated with clay soils. Local endemic to the Beaumont and Yucaipa area. 760-1065 meters.
Arabis johnstonii Johnston's rock cress	FSS CNPS 1B.2				Feb-June	MC/CC	X		Occurs within chaparral and lower montane coniferous forest. Often associated within eroded clay soils. 1350-2150 meters.
Arctostaphylos rainbowensis rainbow manzanita	CNPS 1B.1				Dec-March	MC/CC			Most often occurs in Gabbro soils within chaparral in Riverside and San Diego counties. 225-670 meters.
Astragalus pachypus var. jaegeri Jaeger's milkvetch	CNPS 1B.1		X	X	Dec-June	AS/CC/MC/RSS/ NNG			Occurs in a variety of habitats including chaparral, cismontane woodland, coastal scrub and valley/foothill grassland habitats. Occurs locally within the "badlands" south of Beaumont and Potrero Canyon area. 365-915 meters.
Atriplex coronata var. notatior San Jacinto valley crownscale	FE CNPS 1B.1		X		April-Aug	CAM/NNG		X	Occurs primarily in floodplains dominated by alkali scrub, alkali playas, vernal pools, and to a lesser extent alkali grasslands. Restricted to highly alkaline, silty-clay soils in association with Travers-Domino-Willows soil association. 139-500 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Atriplex coulteri Coulter's saltbush	FE CNPS 1B.2	X	X		March-Oct	RSS/NNG			In Western Riverside County, this species has the potential to occur within sage scrub and valley/foothill grassland habitats. Often associated with alkaline or clay soils. 3-460 meters.
Atriplex pacifica south coast saltscale	CNPS 1B.2		X	X	March-Oct	RSS/DSS			In western Riverside county, this species has the potential to occur within sage scrub habitats. A majority of known occurrences for this species are associated with coastal scrub and dune areas. 0-140 meters.
Atriplex parishii Parish's brittlescale	FE CNPS 1B.1		X		June-Oct	CAM/NNG		X	Occurs within alkaline soils and is most often associated with vernal pool and playa habitat types. 25-1900 meters.
Atriplex serenana var. *davidsonii* Davidson's saltscale	CNPS 1B.2		X		April-Oct	CAM/NNG		X	Occurs in gentle hillsides, valleys, and floodplains in semi alkaline mudflats, vernal pools, mesic southern needlegrass grassland, mixed native/non-native grassland and alkaline grassland plant communities in association with clay, loamy sand, or alkaline silty-clay soils. 10-200 meters.
Berberis nevinii Nevin's barberry	FE/SE CNPS 1B.1		X	X	March-June	AS/CC/MC/RSS/ SWS/MS/RS/TS		X	Occurs in a variety of habitats including cismontane woodland, chaparral, sage scrub and riparian scrub habitat. Often associated with sandy or gravelly soils. Closest natural known locations are "badlands" near Redlands and Vail Lake Area. 274-825 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Brodiaea filifolia thread-leaved brodiaea	FT/SE CNPS 1B.1	X	X		March-June	CAM/NNG		X	Occurs on gentle hillsides and floodplain in semi-alkaline mudflats, vernal pools, mesic needle grass, grassland, non-native grassland and alkali grassland Requires mesic, clay habitats; sometimes serpentine. Most known local locations associated with seasonally wet flats in the Perris Area. 25-1219 meters.
Brodiaea orcuttii Orcutt's brodiaea	CNPS 1B.1		X		May-July	CC/MC/CAM			Vernal pools, valley and foothill grasslands, closed-cone coniferous forest, cismontane woodland, chaparral, and meadows. Require mesic, well developed clay habitats; sometimes serpentine. Usually found in vernal pools and small drainages. 30-1692 meters.
Brodiaea santarosae Santa Rosa basalt brodiaea	CNPS 3				May-June	None			Occurs within Valley and foothill grasslands, associated with basaltic flows.
Callitropsis forbesii Tecate cypress	CNPS 1B.1				-	None			Occurs within closed cone coniferous forest and chaparral habitat. Usually associated with clay, gabbroic or metavolcanic soils. 250-1490 meters.
Calochortus palmeri var. *munzii* Munz's Mariposa lily	FSS CNPS 1B.2				June-July	MC/CC	X		Occurs in seasonally moist, fine granitic loam on exposed knolls in the shade of lower montane coniferous forest and on moist, sandy clay in moist chaparral and meadows. 900-1640 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Ceanothus ophiochilus Vail Lake ceanothus	FT/ST CNPS 1B.1				Feb-March	None		X	Occurs within chamise chaparral habitats. Usually found on ridgelines and north facing slopes. Usually associated with gabbroic or pyroxenite-rich rock outcrops. 580-1065 meters.
Centromadia parryi ssp. *australis* southern tarplant	CNPS 1B.1		X	X	May-Nov	VFM/CAM/NNG			Occurs within marshes, swamps, vernally mesic valley/foothill grasslands, and vernal pools. Coastal species. 0-427 meters.
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	CNPS 1B.2				April-June	None			Occurs within Mojavean desert scrub, or pinyon and juniper woodland. Usually associated with sandy or gravelly soils. 300-1200 meters.
Comarostaphylis diversifolia ssp. *diversifolia* summer holly	CNPS 1B.2		X	X	April-June	CC/MC			Occurs within chaparral and Cismontane woodland habitat. Maritime habitats with relatively cool and wet weather. 30-550 meters.
Deinandra mohavensis Mojave tarplant	FSS/SE CNPA 1B.3				June-Oct	CC/MC/RSS/ SWS/MS/CWR/ SSR			Occurs within mesic areas chaparral and sage scrub habitats. Also associated with riparian scrub. 640-1600 meters.
Dudleya cymosa ssp. *ovatifolia* Santa Monica dudleya	FT CNPS 1B.2				May-June	RSS/CC/MC			Known only from the western Santa Monica Mountains.
Dudleya viscida sticky dudleya	CNPS 1B.2	X	X	X	May-June	RSS/MC/CC			Occurs within **c**haparral, cismontane woodland, and sage scrub habitat. Usually associated with rock outcrops. Locally a Santa Ana endemic. 10-550 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Eriastrum densifolium ssp. *sanctorum* Santa Ana River woolystar	FE/SE CNPS 1B.1				May-Sept	AS/RSS/MC/CC			Occurs within alluvial-fans or sandy river terraces. Known from one extended but fragmented population (associated with Santa Ana River). 91-610 meters.
Eryngium aristulatum var. *parishii* San Diego button celery	FE/SE CNPS 1B.1		X		April-June	RSS/NNG			Occurs within vernal pool, sage scrub and valley/foothill grasslands. Almost always under natural conditions in wetlands. 20-620 meters.
Galium angustifolium ssp. *jacinticum* San Jacinto mountains bedstraw	FSS CNPS 1B.3				June-Aug	None	X		Occurs within lower montane coniferous forest habitat. 1350-2100 meters.
Galium californicum ssp. *primum* California bedstraw	FSS CNPS 1B.2				May-July	CC/MC			Occurs within chaparral and lower montane coniferous forest. 1350-1700 meters.
Geothallus tuberosus Campbell's liverwort	CNPS 1B.1	X	X	X	-	RSS/NNG			Occurs within mesic areas of sage scrub habitat and vernal pools often associated with clay soils. 10-600 meters.
Heuchera hirsutissima shaggy-haired alumroot	FSS CNPS 1B.3				May-July	None			Occurs within subalpine coniferous forest and upper montane coniferous forest. 1520-3500 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Holocarpha virgata ssp. *elongata* graceful tarplant	CNPS 4.2		X	X	May-Nov	CC/MC/RSS/NNG			Occurs within cismontane woodland, chaparral, sage scrub and valley/foothill grassland habitat. Locally known within grasslands and oakwoodlands on the Santa Rosa Plateau. Associated well developed clay soils. 60-1100 meters.
Hordeum intercedens vernal barley	CNPS 3.2		X		March-June	RSS/NNG			Occurs in vernal pools or mesic areas within sage scrub and valley/foothill grassland habitats. Often associated with saline flats and depressions. 5-100 meters.
Horkelia cuneata ssp. *puberula* mesa horkelia	CNPS 1B.1	X	X	X	Feb-July	RSS/MC/CC			Occurs in chaparral, cismontane woodland, and coastal scrub. Requires sandy or gravelly sites. Known locally on the Pacific slope of the Santa Ana Mountains. 70-810 meters.
Hulsea vestita ssp. *callicarpha* beautiful hulsea	CNPS 4.2				May-Oct	MC/CC			Occurs within chaparral and lower montane coniferous forest. Often associated with rocky or gravelly, granitic soils. 915-3050 meters.
Imperata brevifolia California satintail	CNPS 2.1	X	X	X	Sept-May	CC/MC/RSS/ SWS/MS/RS/TS			Occurs in a variety of habitat types, including chaparral, sage scrub, Mojavean desert, Riparian scrub, meadows and seeps. Often associated alkaline soils and springs. 0-500 meters.
Juglans californica southern California black walnut	CNPS 4.2		X	X	March-Aug	CC/MC/RSS			Occurs on slopes and in canyons and valleys within chaparral, cismontane woodland, and sage scrub habitats. 50-900 meters.
Juncus luciensis Santa Lucia dwarf rush	CNPS 1B.2				April-July	None			Occurs in chaparral, meadows and seeps, and vernal pools.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	CNPS 1B.1		X		Feb-June	VFM/CAM/NNG		X	Occurs primarily in highly alkaline, silty-clay soils. Travers-Domino-Willows soil association within alkali vernal plains community. 1-1220 meters.
Lilium humboldtii ssp. *ocellatum* ocellated Humboldt lily	CNPS 4.2		X	X	March-Aug	CC/MC/RSS/ SWS/CWR/SSR			Occurs within openings in a variety of habitat types including: chaparral, cismontane woodland, sage scrub, lower montane coniferous forest and riparian woodland. Generally associated with relatively wet and cool regions. 30-1800 meters.
Lepechinia cardiophylla heart-leaved pitcher sage	CNPS 1B.2				April-July	MC/CC		X	Occurs in closed-cone coniferous forest, chaparral, and cismontane woodland. 520-1370 meters.
Lilium parryi lemon lily	CNPS 1B.2				July-Aug	SWS/CWR/SSR			Occurs within lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Prefers wet, mountainous terrain; generally in forested areas, on shady edges of streams, in open boggy meadows and seeps. 1220-2745 meters.
Limnanthes gracilis ssp. *parishii* Parish's meadowfoam	CNPS 1B.2				April-June	CAM/VFM/NNG			Occurs within lower montane coniferous forest, meadows, seeps, and vernal pool habitats**.** Almost always under natural conditions in wetlands. 600-2000 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Mimulus clevelandii Cleveland's bush monkeyflower	CNPS 4.2				April-July	CC/MC			Occurs within chaparral, cismontane woodland, and lower montane coniferous forest. Often associated with gabbroic soils in disturbed areas/openings with above described habitat types. 815-2000 meters.
Mimulus diffusus Palomar monkeyflower	CNPS 4.3				April-June	CC/MC			Occurs within chaparral and lower montane coniferous forest. Often associated with sandy or gravelly soils. 1220-1830 meters.
Monardella hypoleuca ssp. *lanata* felt-leaved monardella	CNPS 1B.2		X	X	June-Aug	CC/MC			Occurs within chaparral and cismontane woodland habitat. 300-1575 meters. Ssp. lanata is excluded from Riverside Co. Northern extent of range is San Luis Rey River in San Diego Co.
Monardella macrantha ssp. *hallii* Hall's monardella	CNPS 1B.3				June-Oct	CC/MC			Occurs within broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, and valley and foothill grassland habitats. Often associated with dry slopes and ridges in openings within the above communities. 730-2195 meters.
Muhlenbergia californica California muhly	CNPS 4.3		X	X	June-Sept	CC/MC/RSS/ SWS/MS/RS/TS/ CWR/SSR/NNG			Occurs within wetlands or mesic sites in chaparral, sage scrub, lower montane forest habitats. Also found in meadows and seeps. Locally known in the San Jacinto Mountains. 100-2000 meters.
Myosurus minimus ssp. *apus* little mousetail	CNPS 3.1		X		March-June	NNG/CAM		X	Occurs in valley/foothill grasslands with alkaline soils and vernal pools. 20-640 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Nama stenocarpum mud nama	CNPS 2.2		X		Jan-July	VFM/CAM/SWS/ MS/RS/TS/CWR/ SSR/NNG		X	Occurs within marshes and along the margins of lakes. 5-500 meters.
Navarretia fossalis spreading (Moran's) navarretia	FT CNPS 1B.1		X		April-June	VFM/CAM/SWS/ MS/RS/TS/CWR/ SSR/NNG	X		Primarily associated with vernal pools, depressions, and ditches in areas that once supported vernal pools. Often associated with a larger vernal floodplain(s) dominated by annual alkali grasslands and alkali playa. 30-1300 meters.
Navarretia prostrata prostrate vernal pool navarretia	CNPS 1B.1		X		April-July	RSS/NNG		X	Occurs within wetlands and mesic sites found within habitat types including: sage scrub, meadows and seeps alkali valley/foothill grassland. Also associated with Vernal pools. 15-700 meters.
Nolina cismontana peninsular nolina	CNPS 1B.2				May-July	None			Occurs within chaparral and sage scrub habitats. Often associated with sandstone or gabbro soils. 140-1275 meters.
Orcuttia californica California Orcutt grass	FE/SE CNPS 1B.1		X		April-Aug	NNG/CAM	X		All known localities are associated with vernal pools. Specifically, southern basaltic clay pan and alkaline vernal pools.
Oxytheca caryophylloides (Sidotheca caryophylloides) chickweed oxytheca	CNPS 4.3				July-Sept	None			Occurs within lower montane coniferous forest habitat. Often associated with sandy soils. 1114-2600 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Penstemon californicus California beardtongue	FSS CNPS 1B.2				May-Aug	MC/CC			Occurs within chaparral, lower montane coniferous forest, and pinyon juniper woodland. Often associated with sandy soils. 1170-2300 meters.
Pentachaeta aurea ssp. *allenii* Allen's daisy	CNPS 1B.1	X	X	X	March-June	RSS/NNG			Occurs within openings in sage scrub and valley/foothill grassland habitats. Locally known on the west slope of the Santa Ana Mountains in Orange County75-520 meters.
Phacelia stellaris Brand's phacelia	SC CNPS 1B.1		X	X	March-June	AS/MS/RS	X		Occurs within sandy washes and alluvial benches in alluvial floodplains. The species is generally dependant on periodic flooding and sediment transport. Generally a coastal species, but few inland locations have been recorded. 1-400 meters.
Phacelia suaveolens ssp. *keckii* Santiago Peak phacelia	CNPS 1B.3				May-June	MC/CC			Occurs within closed-cone coniferous forest and chaparral. 545-1600 meters. Known from only four occurrences.
Polygala cornuta var. *fishiae* fish's milkwort	CNPS 4.3		X	X	May-Aug	CC/MC/SWS/ CWR/SSR			Occurs within chaparral, cismontane woodland, and riparian woodland. Locally known in the Santa Ana Mountains within relatively wetter environments. 100-1000 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Potentilla rimicola cliff cinquefoil	CNPS 2.3				July-Sept	None			Occurs within subalpine coniferous forest and upper montane coniferous forest. Associated with granitic, rocky areas and soils. Known in CA approximately five occurrences in the San Jacinto mountains. 2400-2800 meters.
Quercus dumosa Nuttall's scrub oak	CNPS 1B.1		X	X	Feb-April	RSS/CC/MC			Occurs in coastal areas within closed-cone coniferous forest chaparral, sage scrub. Usually associated with sandy, clay loam soils. 15-400 meters.
Quercus engelmannii Engelmann oak	CNPS 4.2		X	X	July-Dec	CC/MC/SWS/ CWR/SSR/NNG/ CLOWR/CLOWU			Occurs within chaparral, cismontane woodland, riparian woodland, valley/foothill grassland habitat. Locally known in the Santa Rosa Plateau and the Crown Valley area near lake Skinner. 50-1300 meters.
Satureja chandleri San Miguel savory	CNPS 1B.2		X	X	March-July	RSS/NNG/MC/ CC	X		Occurs in chaparral, cismontane woodland, coastal scrub, riparian woodland, valley/foothill grasslands. Requires rocky, gabbroic or metavolcanic substrate. Often found within these plant communities after burns. Locally known on the eastern slope of the Santa Ana Mountains. 20-1200 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Sibaropsis hammittii Hammitt's clay-cress	CNPS 1B.2	X	X	X	March-April	CC/MC/NNG	X		Occurs within openings in chaparral and valley/foothill grasslands. Often associated higher elevation (1000 meters) and within well developed clay soils. 720-1065 meters.
Sidalcea neomexicana Salt Spring checkerbloom	CNPS 2.2		X		March-June	CC/MC/RSS			Usually occurs in wetlands, but occasionally found in non wetland environs. Occurs within chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and alkaline playas. 15-1530 meters.
Tetracoccus dioicus Parry's tetracoccus	CNPS 1B.2				April-May	CC/MC/RSS			Occurs in stony and gabbroic soil within chaparral and coastal scrub. 165-1000 meters.
Tortula californica California screw moss	CNPS 1B.2		X	X	-	NNG/CAM			Occurs within chenopod scrub and valley/foothill grassland. Usually associated with sandy, soil. 10-1460 meters.
Trichocoronis wrightii var. wrightii Wright's trichocoronis	CNPS 2.1				May-Sept	VFM/CAM/NNG/ SWS/CWR/SSR	X		Occurs within meadows and seeps, marshes and swamps, riparian forest and vernal pool habitat. Usually associated with alkaline soils. 5-435 meters.
Viguiera viguiera (purisimae) La Purisima viguiera	CNPS 2.3				April-Sept	MC/CC			Occurs within coastal bluff scrub and chaparral. CNPS maps this species range within Orange and San Diego Counties only. 365-425 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat

Definitions:

Plant Communities:

AS	Alluvial Scrub
CAM	Cismontane Alkali Marsh
CC	Chamise Chaparral
CLOWR	Coast Live-Oak Woodland-Riparian
CLOWU	Coast Live-Oak Woodland-Upland
CWR	Southern Cottonwood/Willow Riparian Forest
DSS	Diegan Sage Scrub
MC	Mixed Chaparral
MS	Mulefat Scrub
NNG	Nonnative Grassland
RS	Riparian Scrub
RSS	Riversidean Sage Scrub
SSR	Southern Sycamore Riparian Woodland
SWS	Southern Willow Scrub
TS	Tamarisk Scrub
VFM	Valley Freshwater Marsh

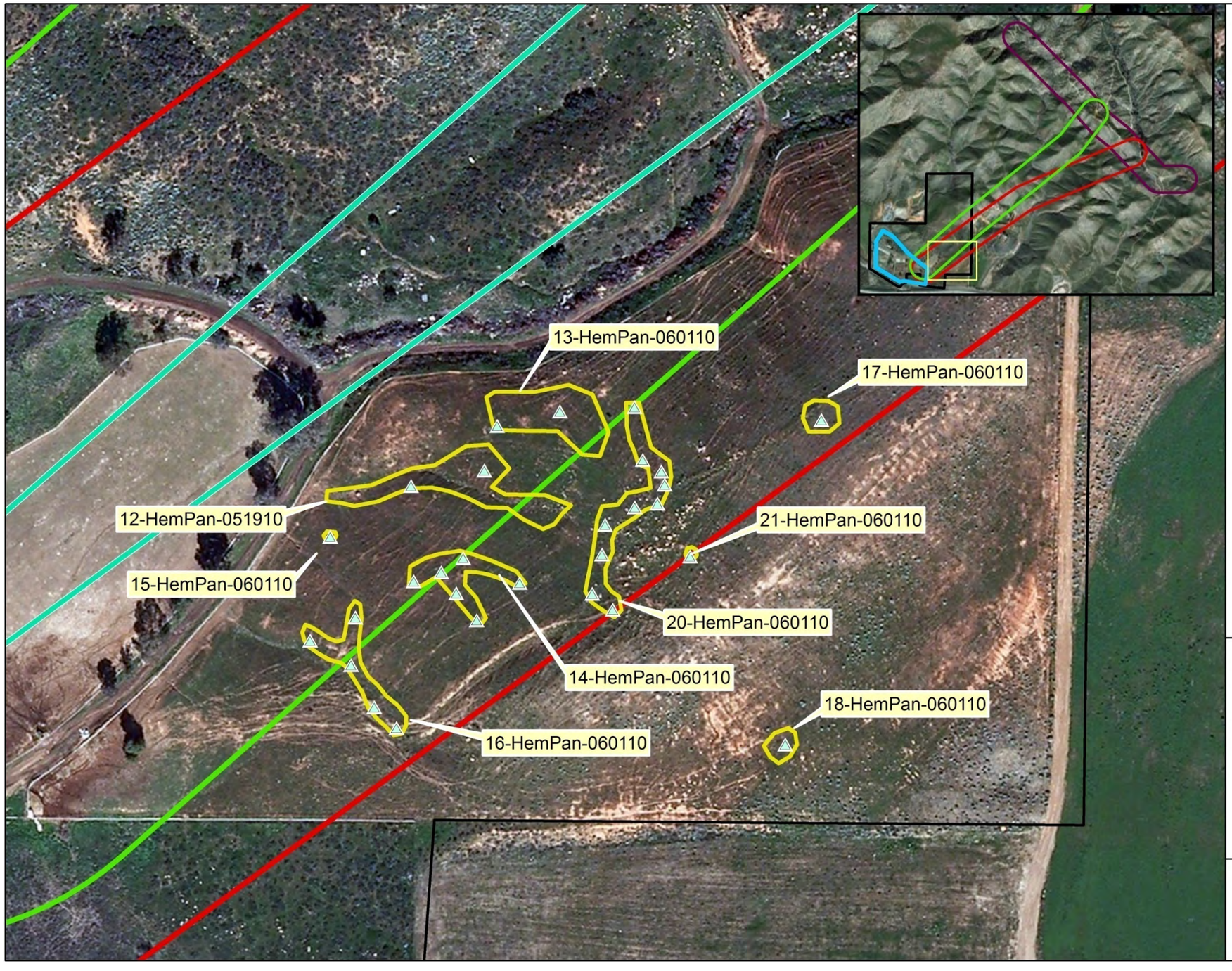
CNPS Status Codes:

List 1A	Presumed extinct in California
List 2	Presumed extinct in California, but more common elsewhere
List 3	We need more information about this plant
List 4	Limited distribution (watch list)
.1	Seriously endangered in CA (over 80% of occurrences threatened/high degree and immediacy of threat)
.2	Fairly endangered in CA (20-80% occurrences threatened)
.3	Not very endangered in CA (<20% of occurrences threatened or no current threats known)

Status Codes:

FE	Federally Endangered
FT	Federally Threatened
SE	State Endangered
ST	State Threatened

Appendix E
Sensitive Plant Observation Figures



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Hemizonia paniculata

Basemap Data

- Freeways/Highways
- Roads
- Streams



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-1 Sensitive Plant Obs Substation Area.mxd

Date: 6/14/2010

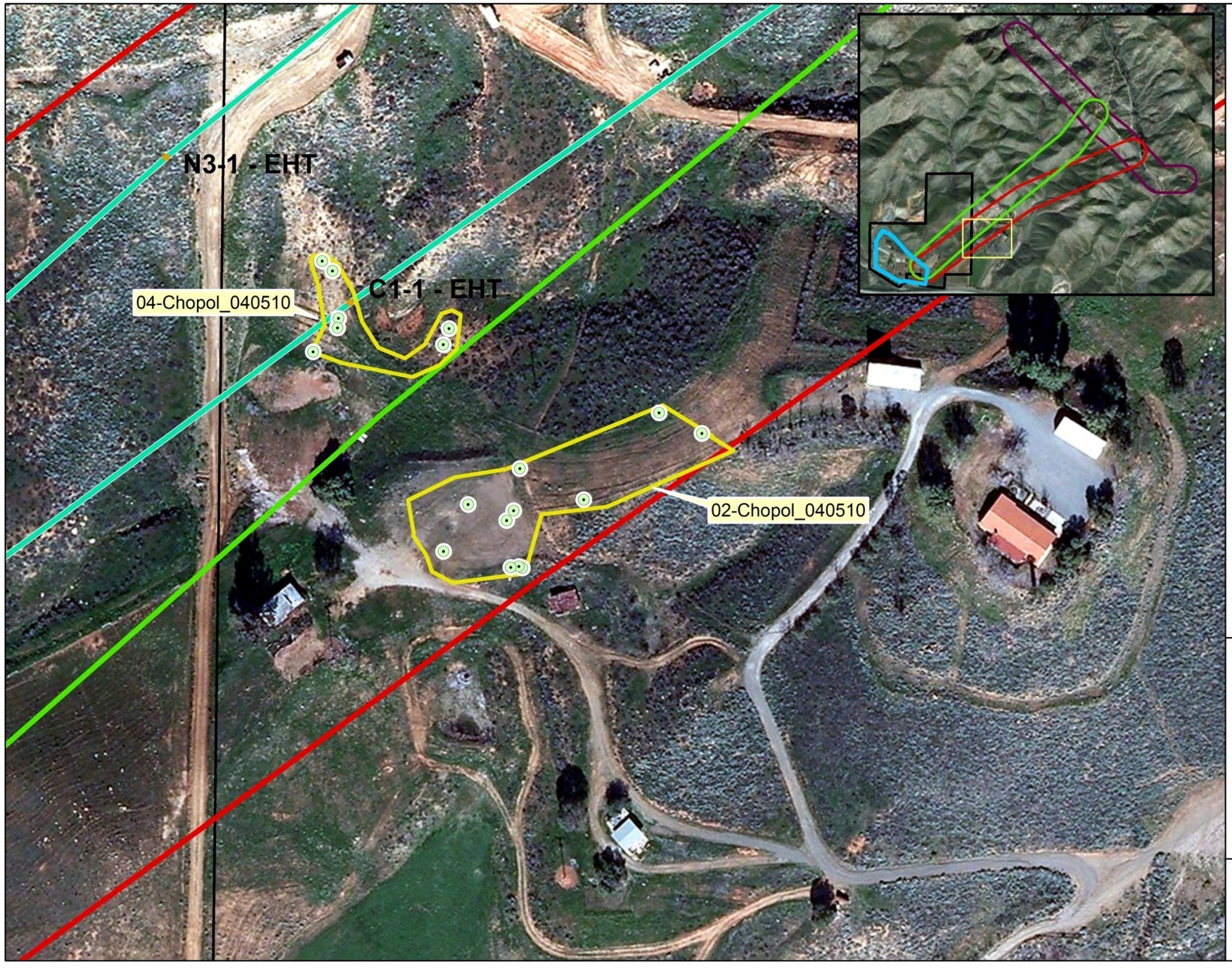
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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AECOM

Figure E-1

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Chorizanthe polygonoides var. longispina

Basemap Data

- Freeways/Highways
- Roads
- Streams



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet

Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-2 Sensitive Plant Obs Substation Area.mxd

Date: 6/14/2010

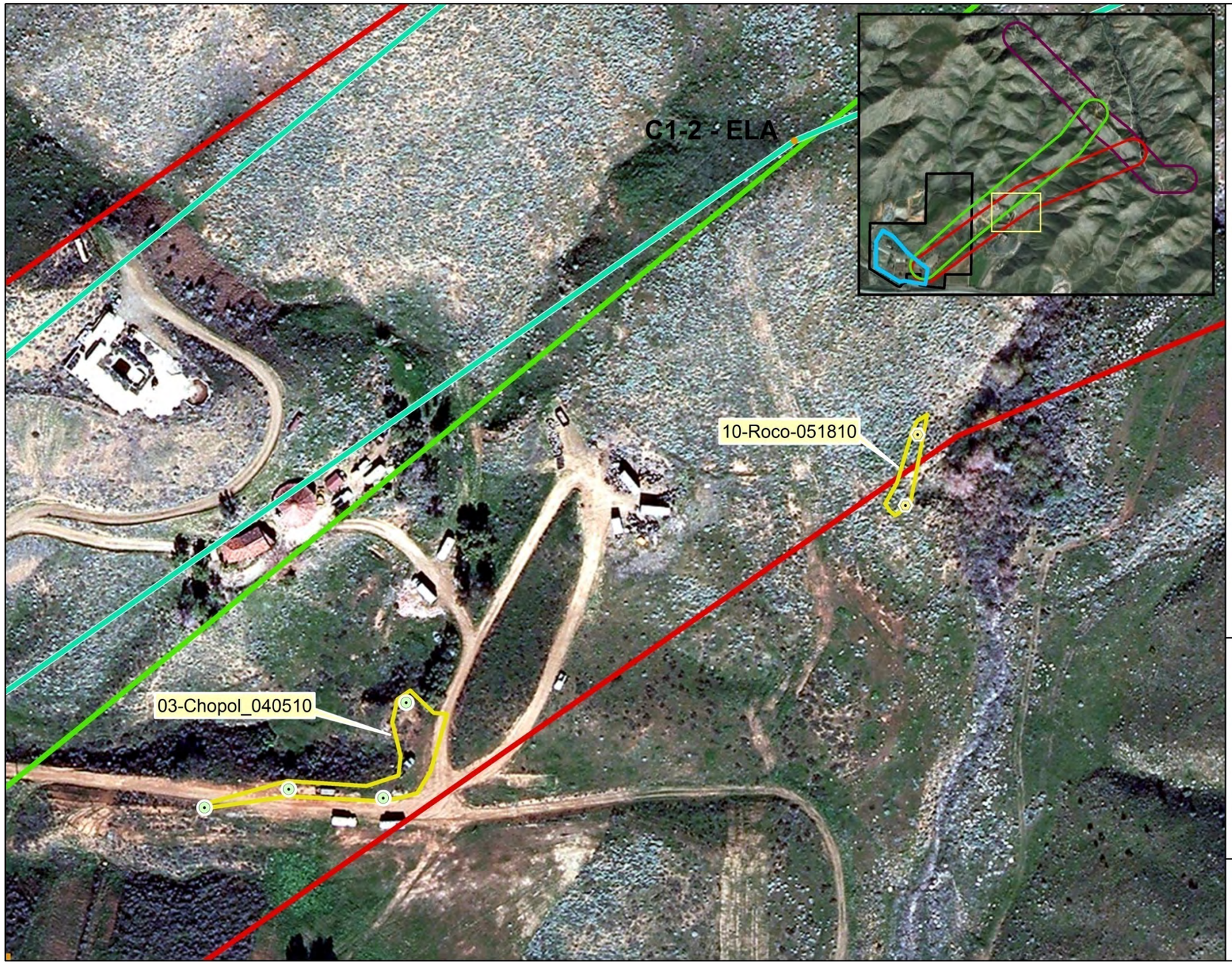
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AECOM

Figure E-2

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Chorizanthe polygonoides var. longispina
- Romneya coulteri

Basemap Data

- Freeways/Highways
- Streams
- Roads



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-3 Sensitive Plant Obs Substation Area.mxd

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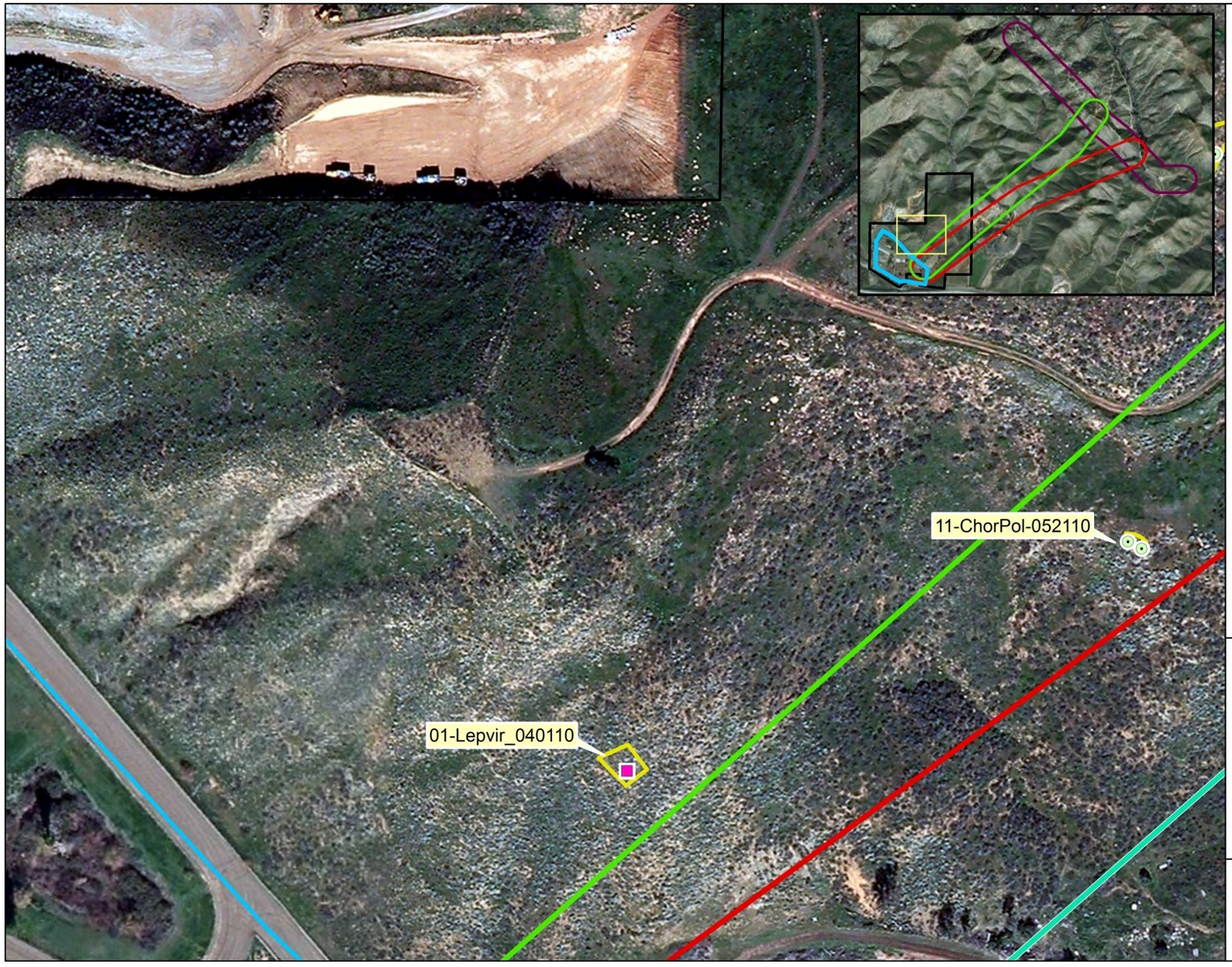
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AECOM

Figure E-3

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Chorizanthe polygonoides var. longispina
- Lepidium virginicum robinsonii

Basemap Data

- Freeways/Highways
- Streams
- Roads



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-4 Sensitive Plant Obs Substation Area.mxd

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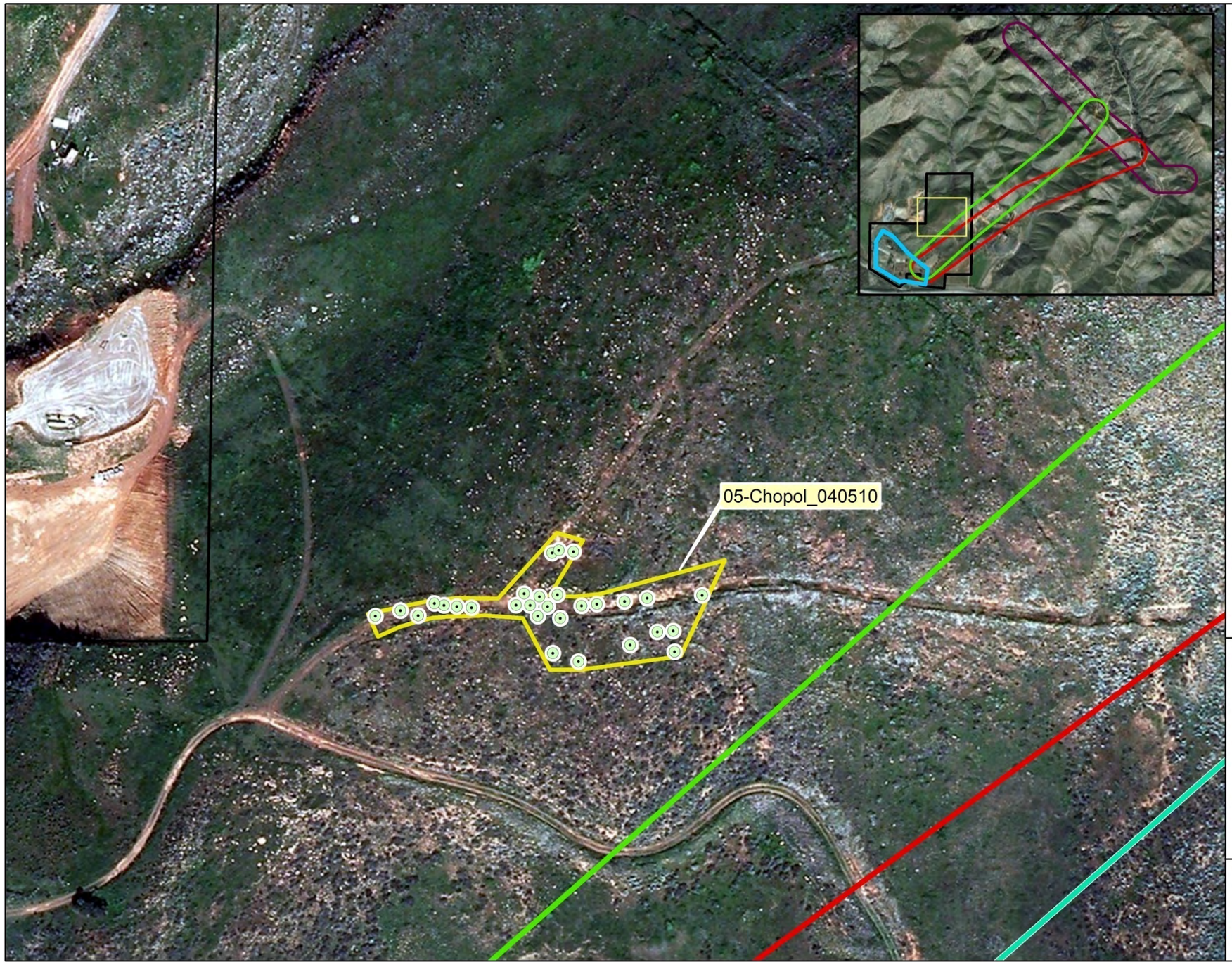
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AECOM

Figure E-4

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Chorizanthe polygonoides var. longispina

Basemap Data

- Freeways/Highways
- Roads
- Streams



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet

Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-5 Sensitive Plant Obs Substation Area.mxd

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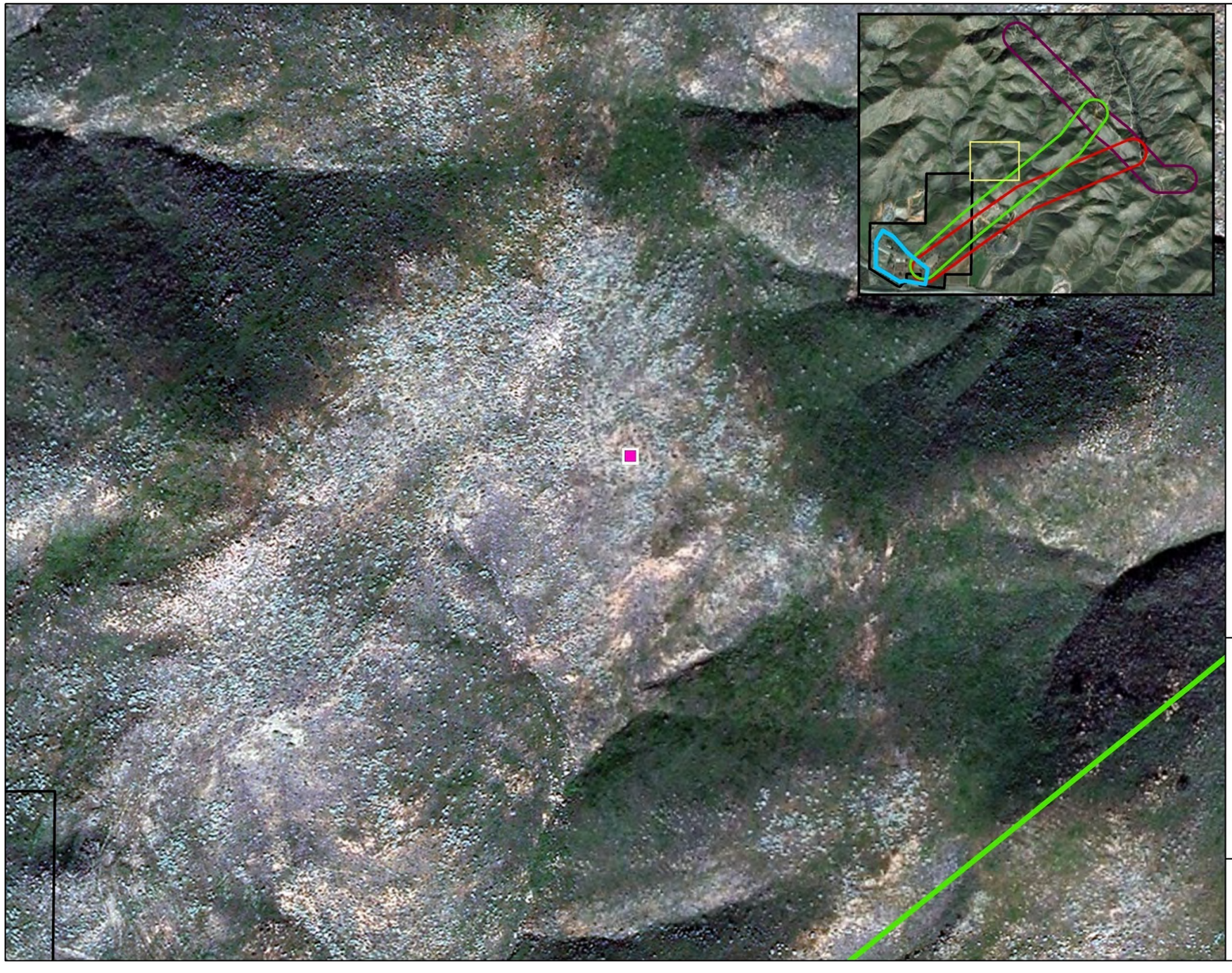
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AECOM

Figure E-5

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Lepidium virginicum robinsonii

Basemap Data

- Freeways/Highways
- Streams
- Roads



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet

Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-6 Sensitive Plant Obs Substation Area.mxd

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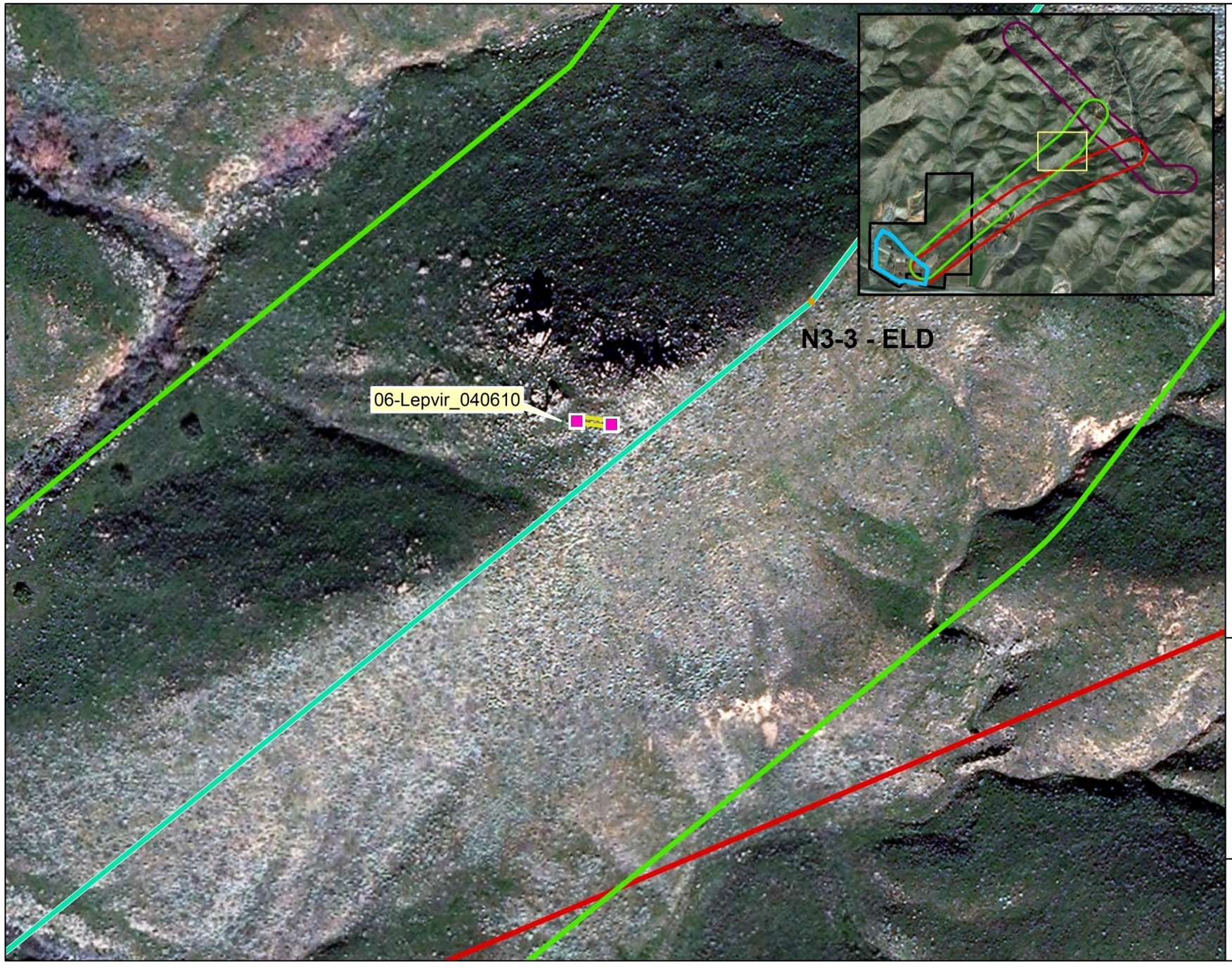
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AECOM

Figure E-6

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
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- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Lepidium virginicum robinsonii

Basemap Data

- Freeways/Highways
- Streams
- Roads



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
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Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-7 Sensitive Plant Obs Substation Area.mxd

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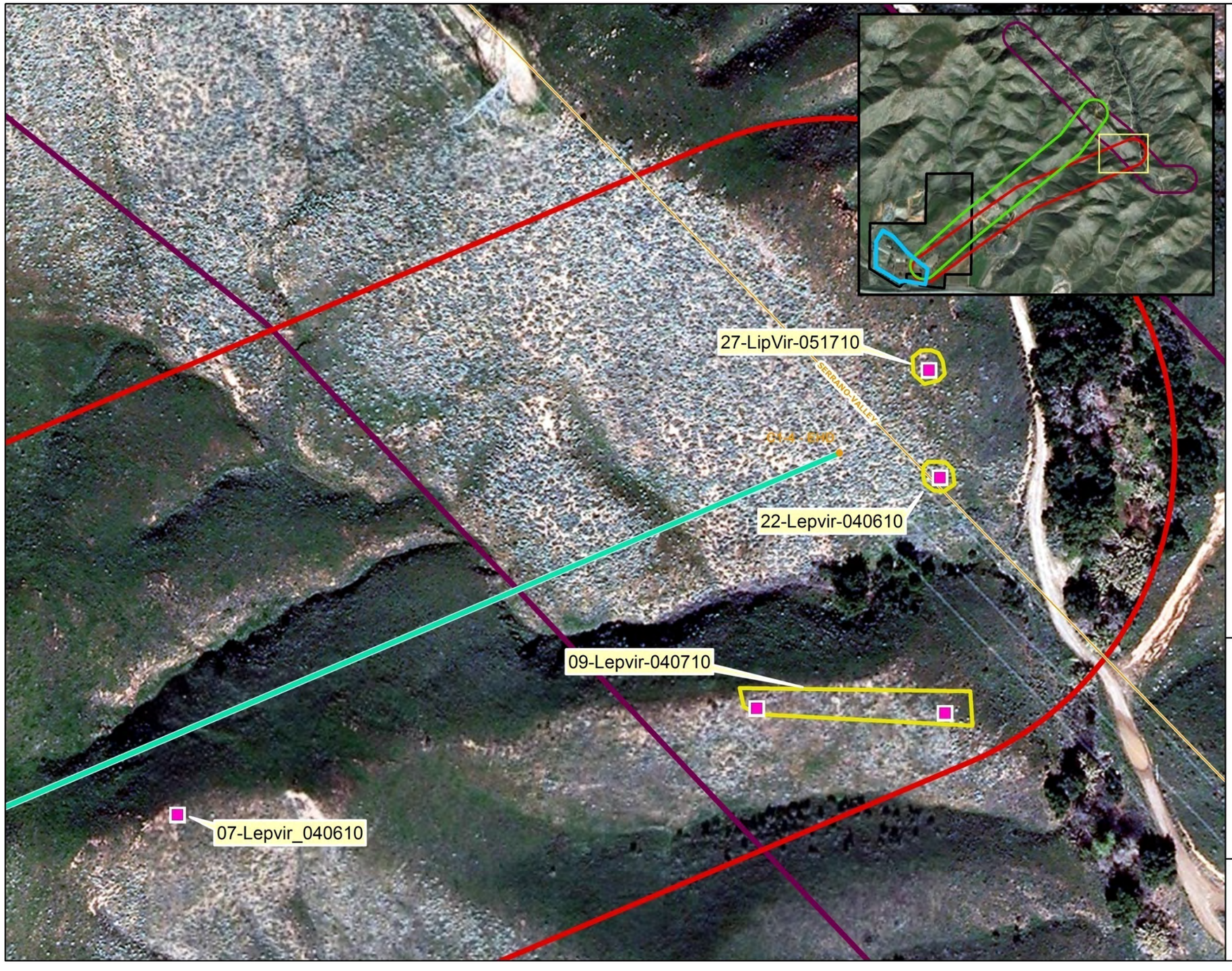
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100 50 0 100 Feet

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Figure E-7

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Lepidium virginicum robinsonii

Basemap Data

- Freeways/Highways
- Streams
- Roads



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet

Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-8 Sensitive Plant Obs Substation Area.mxd

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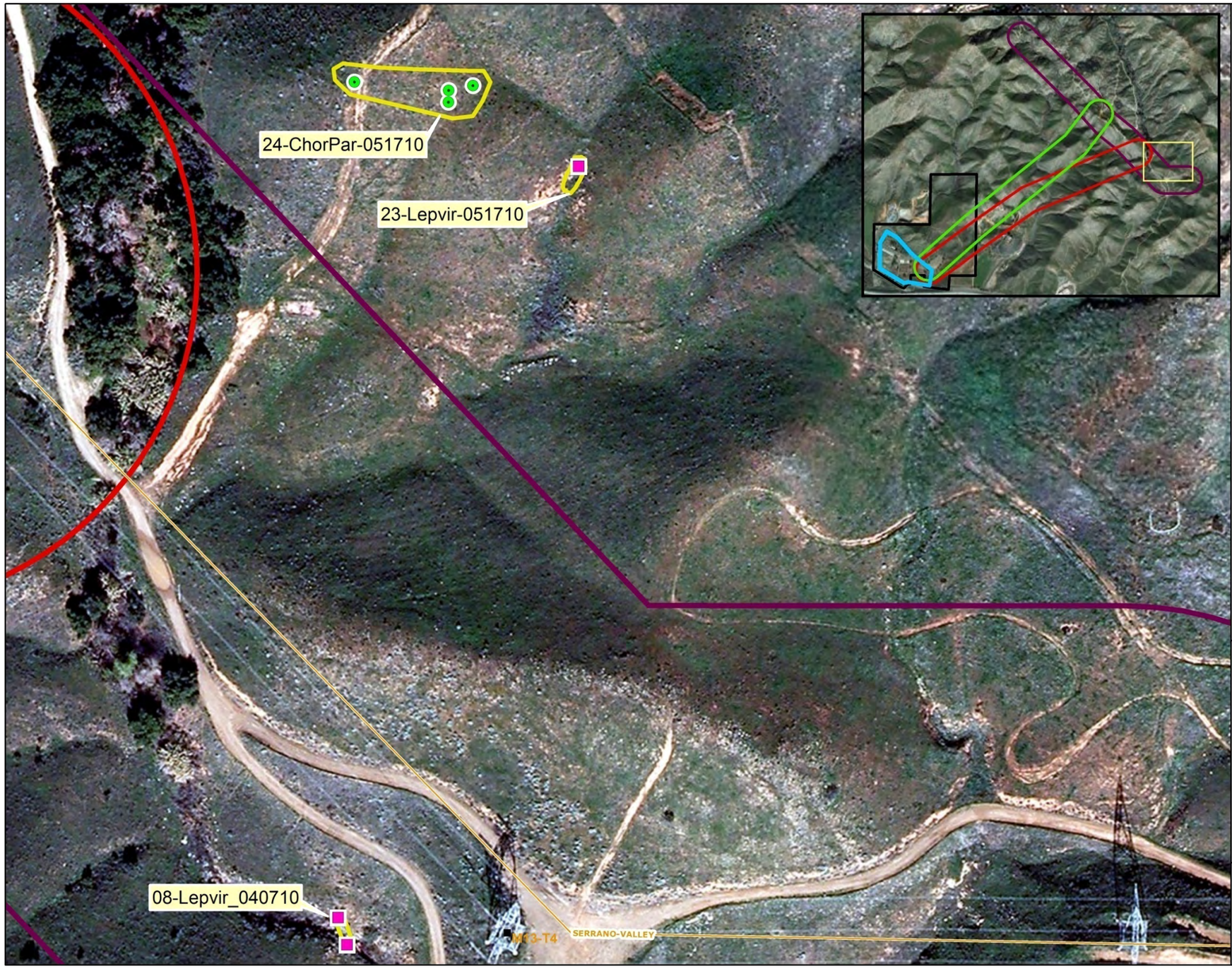
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

100 50 0 100 Feet

AECOM

Figure E-8

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data

- Alberhill Substation Study Area
- Alberhill Substation - Area of Anticipated Direct Impact
- Existing 115 kV Subtransmission Line
- Existing 500 kV Transmission Line (SCE, 2007)

500 kV Proposed Project

- C1 Survey Area (700 ft wide)
- N3 Survey Area (700 ft wide)
- Existing Serrano-Valley Survey Area (700 ft wide)
- Proposed 500kv Transmission Line
- Proposed 500 kV Tower Locations
- Rack Position
- Existing Tower Location

Sensitive Plant Populations

- Sensitive Plant Population Areas
- Chorizanthe parryi var. parryi
- Lepidium virginicum robinsonii

Basemap Data

- Freeways/Highways
- Streams
- Roads



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet

Path: C:\Projects\Alberhill 2010\ArcGIS\Final\Figure 4-9 Sensitive Plant Obs Substation Area.mxd

Date: 6/14/2010

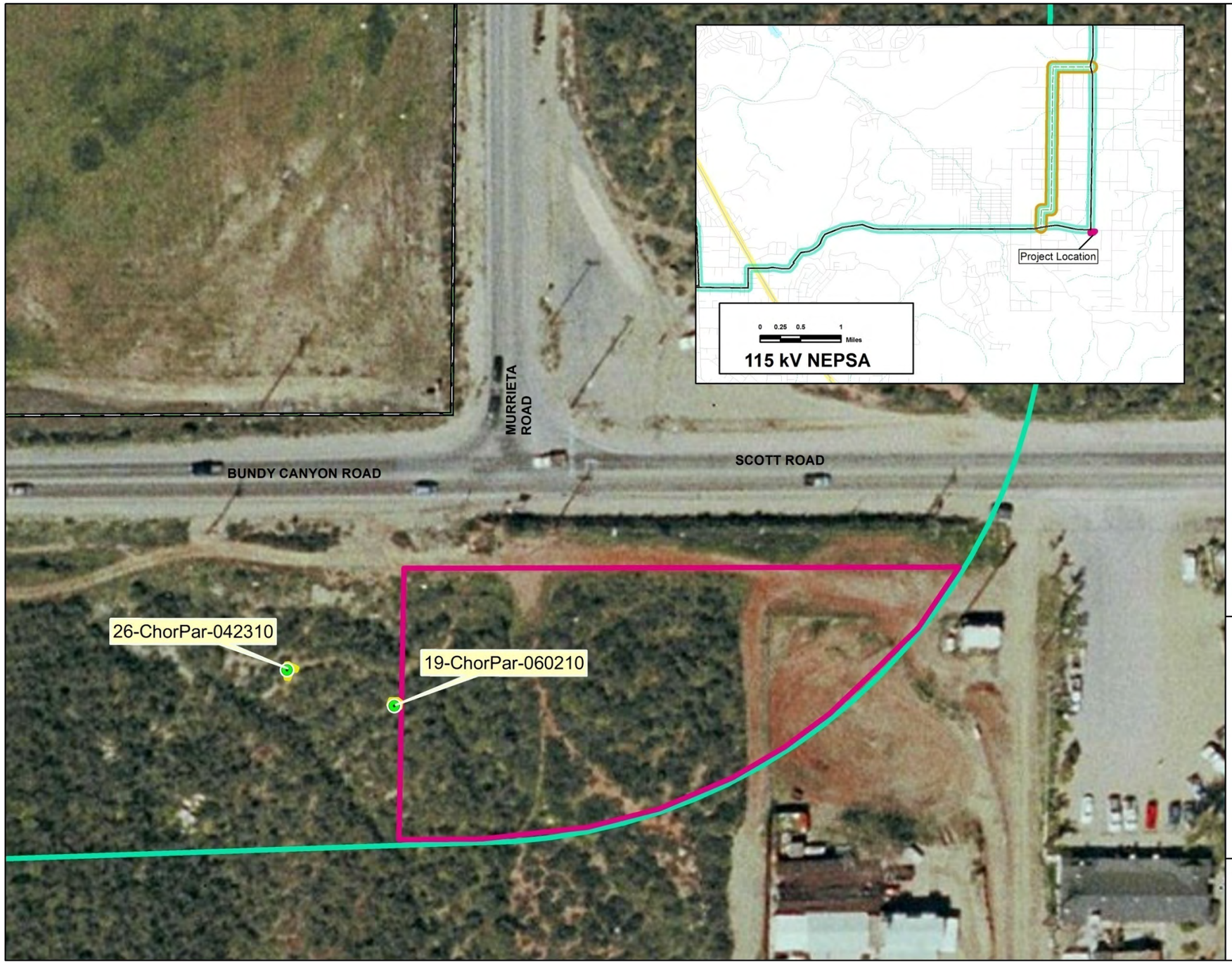
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

100 50 0 100 Feet

AECOM

Figure E-9

Sensitive Plant Observations Substation & 500 kV Study Area



Legend

Project Data
- Alberhill Substation Study Area
- Narrow Endemic Plant Survey Area Within 115 kV Study Area

115 kV Proposed Project
- Proposed 115 kV Survey Area
- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
- Alternative 115 kV Study Area

Sensitive Plant Populations
- Sensitive Plant Population Areas
- Chorizanthe parryi var. parryi

Basemap Data
- Freeways/Highways
- Water Bodies
- Roads
- Streams



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path:
C:\Projects\Alberhill 2010\ArcGIS\Final\
Figure 4-10 Sensitive Plant Obs 115kv NEP.mxd
Date: 6/14/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 25 50 100
Feet

AECOM

Figure E-10

Sensitive Plant Observations
115 kV Narrow Endemic
Plant Survey Area

Appendix F
California Native Species Field Survey Forms

Appendix F-1
California Native Species Field Survey Form
File Name 01-LepVir-040110

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): 04/01/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

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

Total No. Individuals 5 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number UCR Museum / Herbarium

Reporter: Teresa Salvato

Address: 1009 Bascomb Drive, Riverside, CA 92507

E-mail Address: teresa.salvato@ucr.edu

Phone: (909) 720-8534

Plant Information

Phenology: _____% vegetative 5 % flowering 95 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: SCE

Quad Name: Alberhill 7.5' Elevation: _____

T 5S R 5W Sec 16, SE ¼ of NW 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 76C

DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet

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

Coordinates: 33.73687°, -117.41145°; 33.73767°, -117.41241°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Encelia farinosa, Eriogonum fasciculatum var. foliolosum, Bromus trinii, Lupinus bicolor, and weedy (nonnative) grasses, Lupinus sparsiflorus, and Chaenactis artemisiifolia.
Aspects/slope: steep south-facing slope, mid-slope (45%-50%), in dense coastal sage scrub.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments:

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): Confirmed ID by Andy Sanders
- ☑ Other: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

Appendix F-2
California Native Species Field Survey Form
File Name 02-ChorPol-040510

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): 04/05/2010

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 polygonoides var. longispina*

Common Name: long-spined spineflower

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

Total No. Individuals 70 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 East Cooley Drive, Suite 100
Colton, California 92324
E-mail Address: matthew.malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: SCE
Quad Name: Alberhill 7.5' Elevation: 2,242 feet above msl
T 5S R 5W Sec 16, SW ¼ of NE 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 76C
DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 33.737408°, -117.406336°; 33.737678°, -117.405683°; 33.737513°, -117.406160°; 33.737620°, -117.405536°; 33.737426°, -117.405939°; 33.737392°, -117.406180°; 33.737228°, -117.406148°; 33.737273°, -117.406419°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Large graded pad. Dominants include native annuals and perennials and non-native grasses. Co-dominants include Lasthenia gracilis, Plagiobothrys collinus, Bromus rubens, Pectocarya linearis, Crassula connata, Erodium spp., and Lessingia filaginifolia.
Substrates/soils: clay to cobbles.
Aspects/slope: flat terrain, no slope present.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information

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

Immediate AND surrounding land use: Large graded pad, private residences located to the south, and east.

Visible disturbances: Area appears to have been previously graded.

Threats: N/A

Comments:

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: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-3
California Native Species Field Survey Form
File Name 03-ChorPol-040510

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): 04/05/2010

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 polygonoides var. longispina*

Common Name: long-spined spineflower

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

Total No. Individuals 28 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Katie Kurtz
Address: 999 Town & Country Road, 4th Floor
Orange, California 92868
E-mail Address: katie.kurtz@aecom.com
Phone: (714) 689-7309

Plant Information

Phenology: 10 % vegetative 90 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill 7.5' Elevation: 1,362 feet above msl

T 5S R 5W Sec 16, SW ¼ of NE 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 76C

DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet

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

Coordinates: 33.738425°, -117.404775°; 33.738481°, -117.404486°; 33.738458°, -117.404161°; 33.738733°, -117.404086°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: weedy (non-native) grasses, Hirschfeldia incana, mostly bare ground along roadside edge.
Substrates/soils: most likely imported soils along road bed; cobbles, sandy.
Aspects/slope: flat terrain, no slope present.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use: Occurrences along edge of private dirt access road. Private houses adjacent to the east and west of the site.

Visible disturbances: Vehicular traffic and parking of vehicles along road edges.

Threats: Vehicular traffic and parking on road edges.

Comments:

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: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

Appendix F-4
California Native Species Field Survey Form
File Name 04-ChorPol-040510

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): 04/05/2010

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 polygonoides var. longispina*

Common Name: long-spined spineflower

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

Total No. Individuals 78 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Katie Kurtz
Address: 999 Town & Country Road, 4th Floor
Orange, California 92868
E-mail Address: katie.kurtz@aecom.com
Phone: (714) 689-7309

Plant Information

Phenology: 10 % vegetative 90 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: SCE

Quad Name: Alberhill 7.5' Elevation: 1,300 feet above msl

T 5S R 5W Sec 16, SW ¼ of NE 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 76C

DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet

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

Coordinates: 33.738103°, -117.406847°; 33.738075°, -117.406811°; 33.737939°, -117.406789°; 33.737911°, -117.406792°; 33.737842°, -117.406875°; 33.737867°, -117.406428°; 33.737913°, -117.406409°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Dominants include non-native grasses, co-dominants include Plagiobothrys collinus, Bromus rubens, and Lessingia filaginifolia.
Substrates/soils: cobbles, sandy.
Aspects/slope: small basin downslope of a dirt access road, east facing slope.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use: Occurrences along edge of private dirt access road. Private houses adjacent to the south and east of the site.

Visible disturbances: N/A

Threats: N/A

Comments:

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: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-5
California Native Species Field Survey Form
File Name 05-ChorPol-040510

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): 04/05/2010

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 polygonoides var. longispina*

Common Name: long-spined spineflower

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

Total No. Individuals 650 Subsequent Visit? ☑ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 East Cooley Drive, Suite 100
Colton, California 92324
E-mail Address: matthew.malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: 10 % vegetative 90 % flowering _____ % fruiting

Animal Information

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

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

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

33.738592°, -117.410569°; 33.738608°, -117.410483°; 33.738594°, -117.410422°; 33.738631°, -117.410367°; 33.738625°, -117.410333°; 33.738622°, -117.410289°; 33.738619°, -117.410239°; 33.738628°, -117.410086°; 33.738779°, -117.409964°; 33.738783°, -117.409891°

County: Riverside Landowner / Mgr.: SCE

Quad Name: Alberhill 7.5' Elevation: 1,371 feet above msl

T 5S R 5W Sec 16, NE ¼ of NW 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 76C

DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet

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

Coordinates: 33.738659°, -117.409944°; 33.738633°, -117.409808°; 33.738652°, -117.409636°; 33.738662°, -117.409447°; 33.738499°, -117.409539°; 33.738517°, -117.409692°; 33.738491°, -117.409958°; 33.738597°, -117.410011°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Disturbed area east of a dirt access road. Co-dominants include Eriogonum fasciculatum var. foliolosum, Encelia farinosa, Bromus rubens, Lotus scoparius, Festuca myuros, and Lasthenia gracilis.
Substrates/soils: clay to cobbles.
Aspects/slope: gentle south-facing slope present.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information

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

Immediate AND surrounding land use: Occurrences along un-used, overgrown dirt access road. Private houses adjacent to the east of the site.

Visible disturbances: N/A

Threats: Pedestrian traffic.

Comments:

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: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

Appendix F-6
California Native Species Field Survey Form
File Name 06-LepVir-040610

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): 04/06/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

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

Total No. Individuals 55 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 East Cooley Drive, Suite 100
Colton, California 92324
E-mail Address: matthew.malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative 5% flowering 95% fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill 7.5' Elevation: 1,729 feet above msl
T 5S R 5W Sec 9, SE ¼ of SE 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 76C
DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 33.743964°, -117.399600°; 33.743956°, -117.399481°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Co-dominants include Bebbia juncea, Bromus rubens, Microseris lindleyi, Mirabilis laevis, Lotus scoparius, Encelia farinosa, Daucus pusillus, Filago californica, and Euphorbia polycarpa.
Substrates/soils: sandy loam on granitic outcrop.
Aspects/slope: steep south facing slope.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information

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

Immediate AND surrounding land use: Open space.

Visible disturbances: N/A

Threats: N/A

Comments:

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): Teresa Salvato/Andrew Sanders, UCR Herbarium botanists.
☑ Other: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

Appendix F-7
California Native Species Field Survey Form
File Name 07-LepVir-040610

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): 04/06/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

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

Total No. Individuals 500 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 East Cooley Drive, Suite 100
Colton, California 92324
E-mail Address: matthew.malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering 100 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill 7.5' Elevation: 1,733 feet above msl
T 5S R 5W Sec 10, SW ¼ of SW 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 76C
DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy < 3 meters meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 33.742711°, -117.395683°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Co-dominants include Avena barbata, Bromus rubens, Lamarkia aurea, Cylindropuntia californica, Eschscholzia californica, Lasthenia gracilis, and Mirabilis laevis.
Substrates/soils: cobbles.
Aspects/slope: steep east facing slope of ridgeline.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use: Open space.

Visible disturbances: N/A

Threats: N/A

Comments:

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): Teresa Salvato/Andrew Sanders, UCR Herbarium botanists.
☑ Other: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

Appendix F-8
California Native Species Field Survey Form
File Name 08-LepVir-040710

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): 04/07/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

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

Total No. Individuals 75 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 East Cooley Drive, Suite 100
Colton, California 92324
E-mail Address: matthew.malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering 100 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill 7.5' Elevation: 1,525 feet above msl

T 5S R 5W Sec 15, NE ¼ of NW 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 76C

DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet

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

Coordinates: 33.741939°, -117.391762°; 33.741861°, -117.391731°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Co-dominants include Saliva columbariae, Artemisia californica, Encelia farinosa, Bromus rubens, Bebbia juncea, and Mirabilis laevis.
Substrates/soils: cobble to sandy loam and associated with granite boulders (outcrop).
Aspects/slope: steep south facing slopes, along bank of drainage feature.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use: Open space, dirt access road located approximately 65 feet to the northeast of lat/long.

Visible disturbances: N/A

Threats: N/A

Comments: Approximately 150 feet west of Tower M13-T-4 (SCE Serrano-Valley Transmission Line).

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): Teresa Salvato/Andrew Sanders, UCR Herbarium botanists.
☑ Other: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

Appendix F-9
California Native Species Field Survey Form
File Name 09-LepVir-040710

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): 04/07/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

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

Total No. Individuals 300 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 East Cooley Drive, Suite 100
Colton, California 92324
E-mail Address: matthew.malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering 100 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill 7.5' Elevation: 1,597 feet above msl
T 5S R 5W Sec 10, SE ¼ of SW 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 76C
DATUM: **NAD27** ☐ **NAD83** ☐ **WGS84** ☑ Horizontal Accuracy 8 feet meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 33.743035°, -117.393696°; 33.743027°, -117.393049°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Co-dominants includes Saliva columbariae, Bebbia juncea, Bromus rubens, Cylindropuntia californica, and Encelia farinosa.
Substrates/soils: cobble to sandy loam.
Aspects/slope: steep south and north facing slopes

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use: Open space, dirt access road located approximately 200 feet to east of lat/long.

Visible disturbances: N/A

Threats: N/A

Comments: Population extends north from lat/long and covers an area approximately 20 feet by 40 feet.

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): Teresa Salvato/Andrew Sanders, UCR Herbarium botanists.
☑ Other: Feature recognition under 10x magnification

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-10
California Native Species Field Survey Form
File Name 10-RoCo-051810

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): 05/18/2010

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: *Romneya coulteri*

Common Name: Coulter's romneya

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

Total No. Individuals 500 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 East Cooley Drive, Suite 100
Colton, California 92324
E-mail Address: matthew.malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: 10 % vegetative 90 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill Elevation: 1,370
T 5S R 5W Sec 16, NE ¼ of NE 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 530 HCx
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy < 3 meters meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
Coordinates: 33.739315°, -117.402377°; 33.739519°, -117.402338°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Steep east to southeast-facing slope above drainage; local dense colony of several hundred stems, 0.2 mi. above the end of Black Powder Rd. Coastal sage scrub on dry eroding slope above drainage with willows; coastal sage scrub with Encelia farinosa dominant on slope just above on more stable slopes – which were generally more South-facing.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments: Two waypoints were collected near opposite ends of the population, but on gentler slopes above . The occupied slope was too steep to gain access

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): Andy Sanders, UCR Herbarium/Survey Botanist
☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-11
California Native Species Field Survey Form
File Name 11-ChorPol-052110

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): _____

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: *Choriznathe polygonoides var. longispina*

Common Name: long-spined spineflower

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

Total No. Individuals 50 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 0 % vegetative 60 % flowering 40 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: _____

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.737528°, -117.409683°; 33.737547°, -117.409730°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population occurs on a southeast facing slope (mid-slope) in clay lens within RSS. Slope is 0-5% (relatively flat area on slope). Soils rocky clay loam; cryptogamic crust present (well developed). Dominant associates include: Hemizonia fasciculata, Encelia farinosa, Salvia apiana, Eriogonum fasciculatum var. foliolosum.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

Appendix F-12
California Native Species Field Survey Form
File Name 12-HemPan-051910

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 1,700 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 90 % vegetative 10 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1240

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.735830°, -117.409522°; 33.735877°, -117.409271°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Large population of Hemizonia paniculata observed in and around an upland swale on a southwest facing dry slope. The population of sensitive Hemizonia is growing in conjunction with Hemizonia kelloggii. Dominant associates include: Brassica geniculata, Lessingia filaginifolia, Plantago erecta, Bromus rubens. Other species observed in the vicinity are Eriogonum fasciculatum, Opuntia parryi, Croton sp., and Erodium sp. Soils, cobbly-clay.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

Appendix F-13
California Native Species Field Survey Form
File Name 13-HemPan-060110

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 1,200 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 90 % vegetative 10 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1240

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.736049°, -117.409013°; 33.736005°, -117.409228°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Large population of Hemizonia paniculata observed on a southwest facing slope. The population of sensitive Hemizonia is growing in conjunction with Hemizonia kelloggii. Dominant associates include: Brassica geniculata, Lessingia filaginifolia, Plantago erecta, Bromus rubens. Other species observed in the vicinity are Eriogonum fasciculatum, Opuntia parryi, Croton sp., and Erodium sp. Soils, cobbly-clay.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

Appendix F-14
California Native Species Field Survey Form
File Name 14-HemPan-060110

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 320 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 90 % vegetative 10 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1240

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.735557°, -117.409509°; 33.735584°, -117.409415°; 33.735625°, -117.409340°; 33.735555°, -117.409145°; 33.735447°, -117.409291°; 33.735524°, -117.409362°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Large population of Hemizonia paniculata observed on a southwest facing slope. The population of sensitive Hemizonia is growing in conjunction with Hemizonia kelloggii. Dominant associates include: Brassica geniculata, Lessingia filaginifolia, Plantago erecta, Bromus rubens. Other species observed in the vicinity are Eriogonum fasciculatum, Opuntia parryi, Croton sp., and Erodium sp. Soils, cobbly-clay.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

Appendix F-15
California Native Species Field Survey Form
File Name 15-HemPan-060110

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 17 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 90 % vegetative 10 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1202

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.735682°, -117.409798°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Small population of Hemizonia paniculata observed on a southwest facing slope. Dominant associates include: Brassica geniculata, Lessingia filaginifolia, Plantago erecta, Bromus rubens. Other species observed in the vicinity are Eriogonum fasciculatum, Opuntia parryi, Croton sp., and Erodium sp. Soils, cobbly-clay.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-16
California Native Species Field Survey Form
File Name 16-HemPan-060110

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 420 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 90 % vegetative 10 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1270

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.735451°, -117.409708°; 33.735383°, -117.409863°; 33.735314°, -117.409721°; 33.735194°, -117.409640°; 33.735135°, -117.409563°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Small population of Hemizonia paniculata observed on a southwest facing slope. Dominant associates include: Brassica geniculata, Lessingia filaginifolia, Plantago erecta, Bromus rubens. Other species observed in the vicinity are Eriogonum fasciculatum, Opuntia parryi, Croton sp., and Erodium sp. Soils, cobbly-clay.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-17
California Native Species Field Survey Form
File Name 17-HemPan-060110

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 75 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 90 % vegetative 10 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1307

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.736033°, -117.408114°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population of Hemizonia paniculata observed on west facing slope in RSS habitat. Dominant associates include: Lotus hamatus, Croton sp, Eriogonum fasciculatum, Erodium sp., Bromus rubens, Trichostema lanceolatum, and Lotus scoparius. Soil cobbly-clay. Area of population is approximately 60' in diameter.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-18
California Native Species Field Survey Form
File Name 18-HemPan-060110

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 14 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 95 % vegetative 5 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1307

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.735100°, -117.408226°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population of Hemizonia paniculata observed on a gentle southeast facing slope. Associates include: Hemizonia kelloggii, Stephanomeria exigua, Eriogonum fasciculatum, Bromus rubens, Encelia farinosa, Lotus scoparius. Soil, Rocky-clay.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-19
California Native Species Field Survey Form
File Name 19-ChorPar-060210

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): _____

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 10 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 10 % vegetative _____ % flowering 90 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Romoland Elevation: 1694

T 6S R 3W Sec 20, NE ¼ of NE 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.641135°, -117.206431°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population of Chorizanthe parryi var. parryi observed in clay opening within Chamise chaparral (dense). Dominant associates include Adenostoma fasciculatum, Brassica geniculata, Pterostegia drymarioides, and Chorizanthe fimbriata.

Other rare taxa seen at THIS site on THIS date: Deinandra (Hemizonia) paniculata
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area is adjacent to residential/commercial development.

Threats: Potential for encroachment

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-20
California Native Species Field Survey Form
File Name 20-HemPan-060210

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 660 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 90 % vegetative 10 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1270

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.736064°, -117.408757°; 33.735912°, -117.408727°; 33.735880°, -117.408662°; 33.735842°, -117.408650°; 33.735788°, -117.408674°; 33.735776°, -117.408752°; 33.735640°, -117.408863°; 33.735481°, -117.408824°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Large population of Hemizonia paniculata observed on a southwest facing slope. The population of sensitive Hemizonia is growing in conjunction with Hemizonia kelloggii. Dominant associates include: Brassica geniculata, Lessingia filaginifolia, Plantago erecta, Bromus rubens. Other species observed in the vicinity are Eriogonum fasciculatum, Opuntia parryi, Croton sp., and Erodium sp. Soils, cobbly-clay.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle. Native sage scrub habitat recovering.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-21
California Native Species Field Survey Form
File Name 21-HemPan-060110

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): 06/01/2010

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: *Deinandra (Hemizonia) paniculata*

Common Name: Paniculate Tarplant

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

Total No. Individuals 16 Subsequent Visit? ☐ yes ☑ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100

E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 10 % vegetative 90 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1283

T 5S R 5W Sec 16, SE ¼ of NW 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 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 meters meters/feet

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

Coordinates: 33.735637°, -117.408560°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population of Hemizonia paniculata observed on west facing slope in RSS habitat. Dominant associates include: Lotus hamatus, Croton sp, Eriogonum fasciculate, Erodium sp., Bromus rubens, Trichostema lanceolatum, and Lotus scoparius. Soils cobbly clay. Area of population is approximately 10' in diameter.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: Area has historically been used as a large pasture/holding pen for cattle.

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Survey botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

Appendix F-22
California Native Species Field Survey Form
File Name 22-LepVir-040610

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): 05/17/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's pepper-grass

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

Total No. Individuals 10 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 E. Cooley Dr., Suite 100
Colton, Ca 92324
E-mail Address: Matthew.Malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering 100 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill Elevation: 1621
T 5S R 5W Sec 10, SE ¼ of SW 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 Rhino 530 HCx
DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 Meters meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 33°44'37.33"N, 117°23'35.07"W; 33°44'38.44"N, 117°23'35.22"W

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Lepidium virginicum L. var. robinsonii found on gentle north facing slope. Soils are gravel loam. Co-dominate plant species include: Encelia farinosa, Bromus rubens, Cylindropuntia californica, and Eschscholzia californica.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Project Botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-23
California Native Species Field Survey Form
File Name 23-LepVir-051710

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): 05/17/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's pepper-grass

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

Total No. Individuals 200 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 E. Cooley Dr., Suite 100
Colton, Ca 92324
E-mail Address: Matthew.Malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering 100 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill Elevation: 1615
T 5S R 5W Sec 10, SE ¼ of SW 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 Rhino 530 HCx
DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 Meters meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 33.744094°, -117.390967°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population of Lepidium virginicum var. robinsonii observed on an east facing slope. Vegetation density on slope was noted to be generally sparse. Population was noted to be widespread and covers and area approximately 20 feet by 50 feet. Associated dominant vegetation includes: Eriogonum elongatum, Festuca micostachys var. pauciflora, Chaenactis artemisiifolia, And Thysanocarpus curvipes.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Project Botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-24
California Native Species Field Survey Form
File Name 24-ChorPar-051710

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): 05/17/2010

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 260 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 E. Cooley Dr., Suite 100
Colton, Ca 92324
E-mail Address: Matthew.Malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: 10 % vegetative 90 % flowering _____ % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill Elevation: 1590
T 5S R 5W Sec 10, SE ¼ of SW 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 Rhino 530 HCx
DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 Meters meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 33.744328°, -117.391738°; 33.744273°, -117.391415°; 33.744307°, -117.391415°; 33.744321°, -117.391332°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population observed on a Southeast facing gentle slope with open coastal sage scrub and annuals. Total of 260 individuals made up of 4 separate populations observed with the same general area. Observed associated dominants include Eriogonum fasciculatum var. polifolium, Salvia apiana, and Encelia farinosa. Chorizanthe parryi var. parryi was mostly in openings between shrubs. Soils, decomposed granite soils.

Other rare taxa seen at THIS site on THIS date: Lepidium virginicum var robisonii
(separate form preferred)

Site Information

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments: N/A

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): Andy Sanders, UCR Herbarium/Project Botanist
☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-26
California Native Species Field Survey Form
File Name 26-ChorPar-042310

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): 04/23/2010

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 500 Subsequent Visit? ☑ yes ☐ no

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

Collection? If yes: _____ Number UCR Herbarium Museum / Herbarium

Reporter: Matthew Malle, AECOM Biologist
Address: 1461 E. Cooley Dr., Suite 100
E-mail Address: Matthew.Malle@AECOM.com
Phone: (909) 554-5041

Plant Information

Phenology: 10 % vegetative 90 % flowering 0 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Romoland Elevation: 1,700 feet
T 6S R 3W Sec 20, NE ¼ of NE 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 76 CSx
DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy 9 feet meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ ***OR*** Geographic (Latitude & Longitude) ☐
Coordinates: N33 38.472, W117 12.399

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Population of Chorizanthe parryi var parryi located on gentle southwest facing slope in clearing between Adenostoma fasciculatum, Ceanothus crassifolius, and Eriogonum fasciculatum. Other annuals observed include Salvia columbariae, Festuca myuros, Plagiobothrys collinus, Cryptantha intermedia, Pterostegia drymarioides, and Amsinckia intermedia. ~90% of the plants were flowering and 10% vegetative (Rough Order of Magnitude). Soils were made up of coarse sand-silt and decomposed granite.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances:

Threats:

Comments: Area is generally comprised of dense native perennial shrubs (e.g. chamise, California buckwheat, ceanothus, black sage) on a south to southwest facing slope. Species richness of native vegetation is high. Very little non-native vegetation cover. Observed soils were predominately decomposed granite in the form of silt, sand (fine-coarse).

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): Andy Sanders, UCR Herbarium
☐ Other: _____

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/08

Appendix F-27
California Native Species Field Survey Form
File Name 27-LepVir-051710

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): 05/17/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's pepper-grass

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

Total No. Individuals 300 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle

Address: 1461 E. Cooley Dr., Suite 100
Colton, Ca 92324

E-mail Address: Matthew.Malle@aecom.com

Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering 100% fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private

Quad Name: Alberhill Elevation: 1621

T 5S R 5W Sec 10, SE ¼ of SW 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 Rhino 530 HCx

DATUM: **NAD27** ☐ **NAD83** ☑ **WGS84** ☐ Horizontal Accuracy < 3 Meters meters/feet

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

Coordinates: 33.744011°, -117.393117°

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Lepidium virginicum L. var. robinsonii found on gentle north facing slope. Soils are gravel loam. Co-dominate plant species include: Encelia farinosa, Bromus rubens, Cylindropuntia californica, and Eschscholzia californica.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments: N/A

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): Teresa Salvato, UCR Herbarium/Project Botanist
- ☐ Other: _____

Photographs: *(check one or more)*

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

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

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Appendix F-28
California Native Species Field Survey Form
File Name 28-051810

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): 05/17/2010

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: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's pepper-grass

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

Total No. Individuals 1 Subsequent Visit? ☐ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Matthew Malle
Address: 1461 E. Cooley Dr., Suite 100
Colton, Ca 92324
E-mail Address: Matthew.Malle@aecom.com
Phone: (909) 554-5041

Plant Information

Phenology: _____% vegetative _____% flowering 100 % fruiting

Animal Information

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

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Alberhill Elevation: 1726
T 5S R 5W Sec 9, SW ¼ of SE 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 Rhino 530 HCx
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy < 3 Meters meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑
Coordinates: 33.743111°, -117.405220°

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Steep south-facing RSS slope dominated with Encelia farinosa. Lepidium growing near small granite boulder outcrop.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information

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

Immediate AND surrounding land use:

Visible disturbances: N/A

Threats: N/A

Comments: N/A

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): Andy Sanders, UCR Herbarium/Project Botanist
☐ Other: _____

Photographs: (check one or more)

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

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

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Alberhill System Project, Riverside County

(Alberhill Substation, Existing 115kV, & Alternative 115kV)

Fairy Shrimp Habitat Assessment

Prepared for:
AECOM
1461 E. Cooley Dr., Suite 100
Colton CA, 92324

Prepared by:
Andrew McGinn Forde
Edith Read
E Read & Associates, Inc.
368 South Grand Avenue
Orange, CA 92866

Assessment Conducted by:
Andrew McGinn Forde
Scott Cameron
Edith Read

Assessment Conducted On:
April 1, 2010
April 28, 2010
April 29, 2010
May 5, 2010

Report Date:
June 23, 2010

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Appendices

Appendix 1. CNDDB Records of Fairy Shrimp Occurrence in the Project Area

INTRODUCTION

This report presents findings of an assessment conducted to determine the presence or absence of vernal pools,[1] stock ponds, ephemeral pools, and other depressions that may support the endangered Riverside fairy shrimp (*Streptocephalus woottoni*), the threatened vernal pool fairy shrimp (*Branchinecta lynchi*), and the Santa Rosa Plateau fairy shrimp (*Linderiella santarosa*) within the boundary of the proposed Alberhill Substation and within 200 feet of the proposed Alberhill 115kV transmission line and the proposed Alberhill 115kV Alternative transmission line.[2] The proposed Alberhill Substation, the proposed Alberhill 115kV, and the proposed Alberhill 115kV Alternative transmission lines are located in western Riverside County, California (Figures 1 and 2). The Riverside fairy shrimp, vernal pool fairy shrimp, and the Santa Rosa Plateau fairy shrimp are included in the Multiple Species Habitat Conservation Plan (MSHCP) as Group 3 species. The MSHCP requires evaluation of take coverage based upon site specific considerations for Group 3 species (MSHCP Vol. 2)[3]. The habitat requirements for each species are discussed below. Appendix 1 provides copies of fairy shrimp location records from the California Natural Diversity Database (CNDDB) for the project region.

Riverside Fairy Shrimp (*Streptocephalus woottoni*)

The federal endangered Riverside fairy shrimp occurs in deep vernal pools, vernal pool like ephemeral ponds, stock ponds and other human modified depressions from Los Angeles County (L.A. Airport) south, east through Orange and western Riverside counties to coastal San Diego County (primarily Camp Pendleton and Otay Mesa) and the vicinity of Baja Mar north of Ensenada in Baja California, Mexico.

Riverside fairy shrimp have narrow habitat requirements that are based on inundation variability, mean water temperatures, and water depth. This species is found in large, long lived pools with low

[1] Section 6.1.2 of the MSHCP defines vernal pools as seasonal wetlands that occur in depression areas, meeting the U.S. Army Corp of Engineers Three-Parameter Test (i.e. must have hydric soil, hydrophytic vegetation, and hydrology) during the wetter portion of the growing season, but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season.

[2] Due to the inherent limitations of habitat-based data, definitive conclusions regarding the actual presence or absence of fairy shrimp cannot necessarily be made in this assessment; therefore, this report is intended to provide the project proponent with general information relative to the potential occurrence of fairy shrimp primarily based on the nature of habitat present.

[3] MSHCP Group 3 Species are defined as "take coverage is warranted based upon site specific considerations and the identification of specific conservation and management conditions for species within a narrowly defined Habitat or limited geographic area within the MSHCP Plan Area."

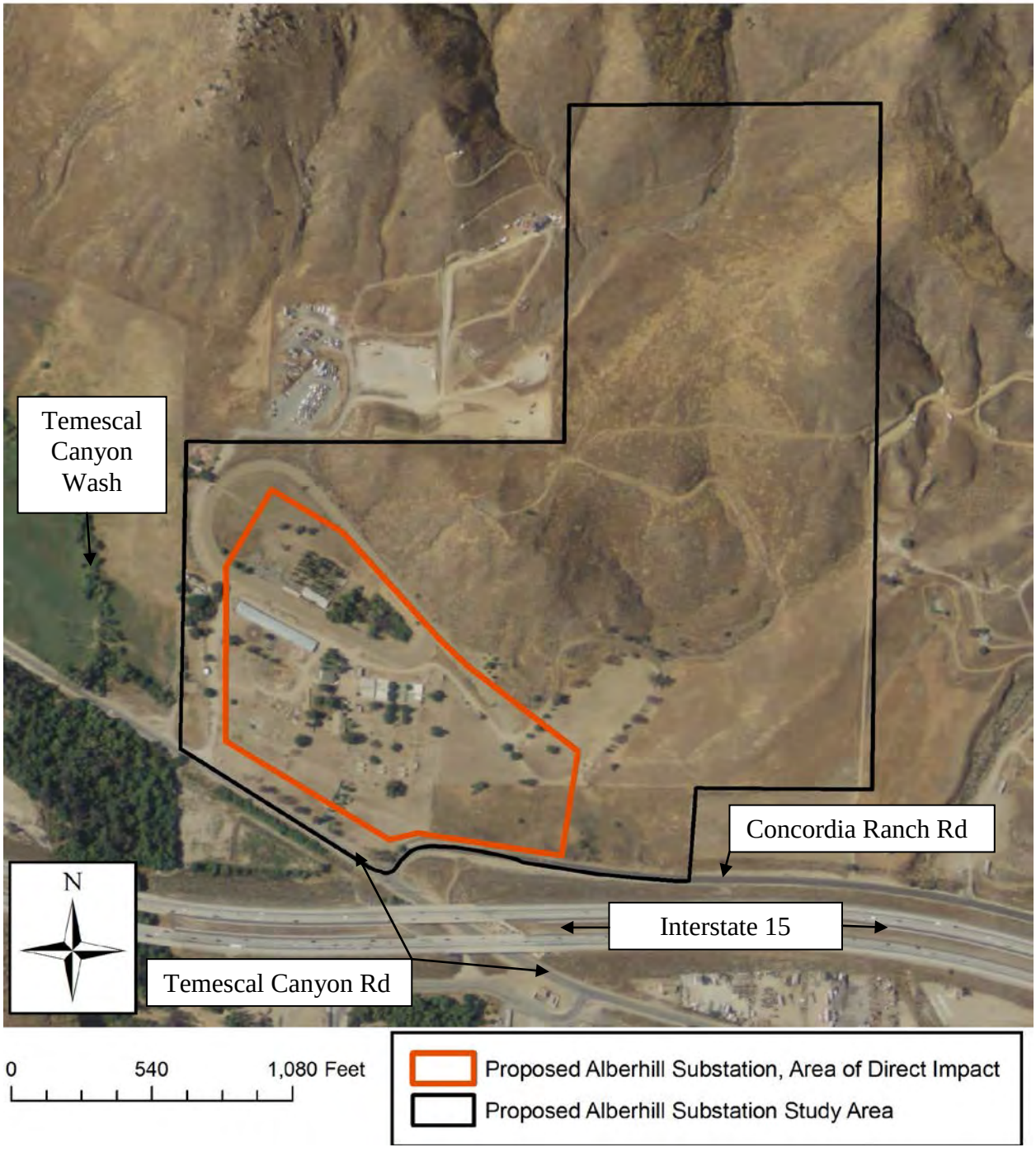


Figure 1. Alberhill Substation Site Location

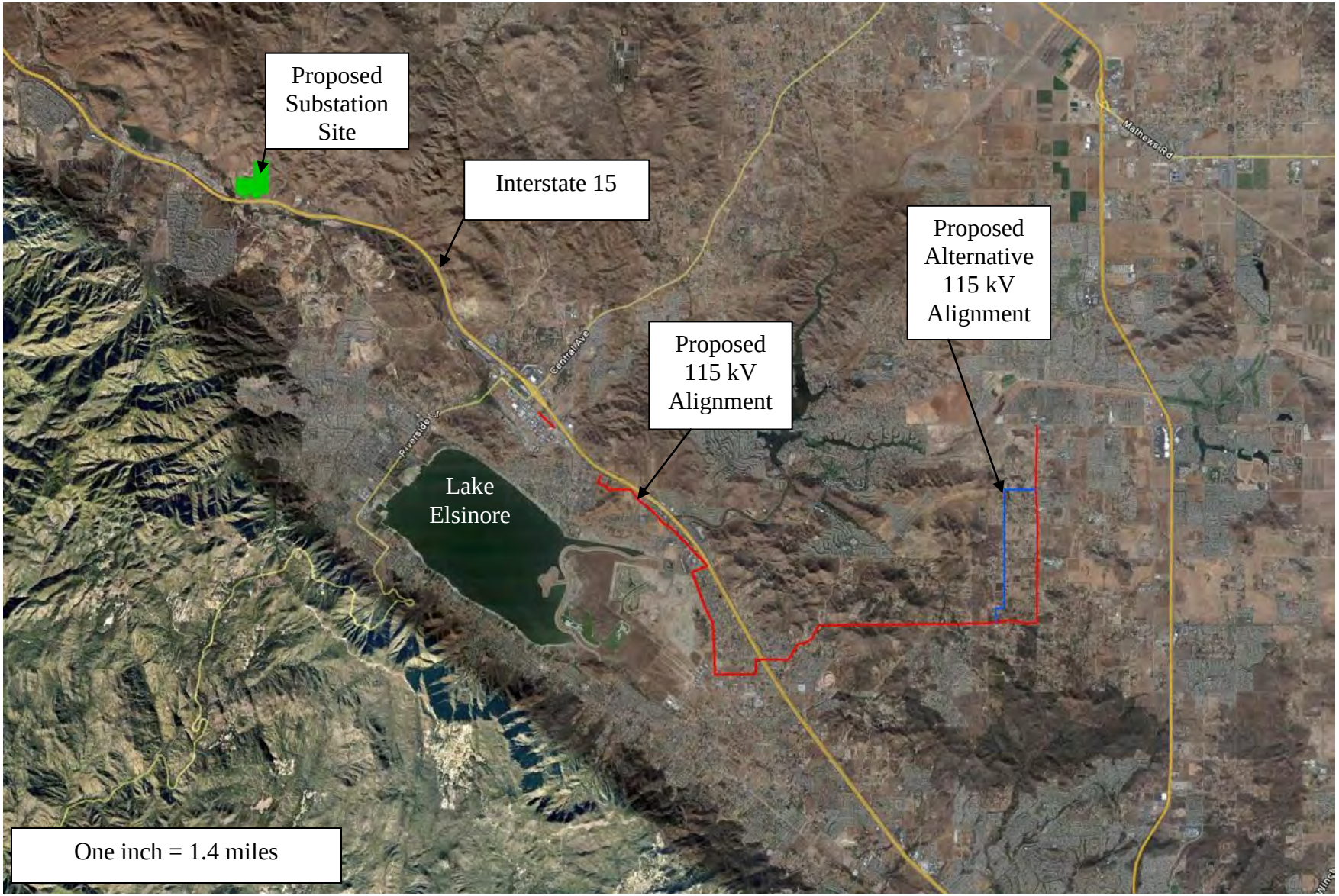


Figure 2. Proposed Transmission Alignments

alkalinity levels and high temperatures. Pools with recorded occurrences of this species have formed over Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils. However, the species has been found in artificial pools in rock quarries, ditches, and other locations with sufficient inundation periods (48-56 days for maturation of one generation).

Within the MSHCP Plan Area, Riverside fairy shrimp is narrowly distributed in suitable habitat from four known localities: Santa Rosa Plateau, Skunk Hollow, Murrieta and Lake Elsinore back basin. Figure 3 shows location records for the species from the California Natural Diversity Database (CNDDB) that are closest to the survey area in the Lake Elsinore region.

Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)

The federal listed threatened vernal pool fairy shrimp occurs in scattered locations throughout the Central Valley from Shasta County to Tulare County, along the Coast Range from Solano County to San Luis Obispo and Santa Barbara counties, and in southern California in Riverside and San Diego counties. *Branchinecta lynchi* occupies shallow, short lived pools with either grass lined or earthen bottoms. This is a widely distributed but otherwise uncommon species whose population distribution and habitat requirements are not well documented. Numerous localities where the vernal pool fairy shrimp have been found are artificial depressions such as ditches and hardpan depressions that simulate their natural habitat requirements. Vernal pool fairy shrimp have a narrow distribution within the MSHCP, with four reported locations outside of the project area: Skunk Hollow, the Santa Rosa Plateau, Salt Creek, and the vicinity of the Pechanga Indian Reservation. No CNDDB records for vernal pool fairy shrimp are listed for the Lake Elsinore or Alberhill areas, but this may be due more to scarcity of surveys and reporting than actual occurrence.

Santa Rosa Plateau Fairy Shrimp (*Linderiella santarosa*)

The Santa Rosa Plateau fairy shrimp is not listed by state or federal agencies but is considered a Riverside County narrow endemic species. The only known occurrence for this species is the Nature Conservancy's Santa Rosa Plateau Ecological Preserve. Habitat requirements for Santa Rosa Plateau fairy shrimp are well defined. The species requires cool, long lived pools on southern basalt flows. It is unlikely that additional populations of this species will be found outside of the Santa Rosa West subregion of the MSHCP Plan Area (*e.g.*, Redonda Mesa, Avenaloca Mesa).

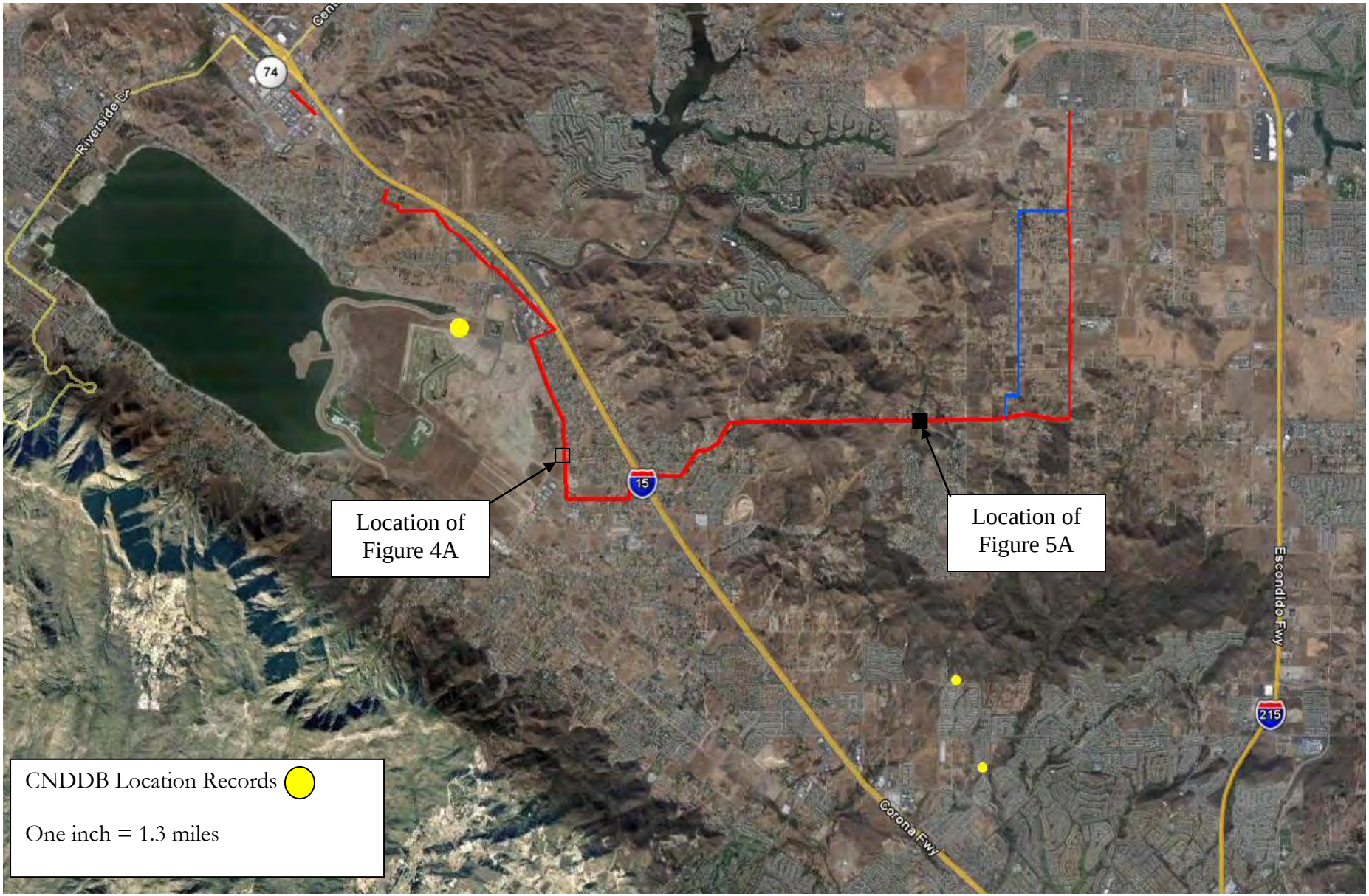


Figure 3. CNDDB Location Records of Riverside Fairy Shrimp (*Streptocephalus woottoni*) in the Project Region

METHODOLOGY

Map Preparation

AECOM provided maps depicting the location of the proposed Alberhill Substation, the proposed Alberhill 115kV transmission line, and the proposed Alberhill 115kV Alternative transmission line. For the proposed Alberhill 115kV and the Alberhill 115kV Alternative transmission lines, the maps depict a 400-foot buffer zone, 200 feet each side of the centerline. The maps also depict soil polygons (~35 acres) within the buffer zones. Soil types represented by the polygons include the Altamont, Auld, Bosanko, Domino, Porterville, Traver, and Willows series, which are designated by the MSHCP as sensitive soils, and the Chino, Fallbrook, Hanford, Honcut, Las Posas, Placentia, Ramona, Tujunga, Vista, Waukena, and Wyman series.

Literature Review

A. Forde reviewed documentation pertaining to the distribution and habitat requirements of fairy shrimp, particularly the Riverside fairy shrimp, the vernal pool fairy shrimp, and the Santa Rosa Plateau fairy shrimp. This included: (1) the CNDDB (2010), (2) the MSHCP, including Section 6.1.2 (Vernal Pools), and (3) literature pertaining to the distribution and habitat requirements of fairy shrimp as listed in the bibliography of this report.

Field Assessment

The proposed substation site was surveyed on April 1, 2010 by A. Forde and E. Read to determine the presence or absence of vernal pools, stock ponds, ephemeral pools, and other features that had potential to support Riverside fairy shrimp, vernal pool fairy shrimp, and/or the Santa Rosa Plateau fairy shrimp. No rain fell during the week prior to the Alberhill Substation assessment.

The proposed transmission alignments and buffer zones were surveyed on April 28 and 29, 2010 by A. Forde and S. Cameron. Rain fell prior to the surveys, over 4 days between April 21 and April 27, for a total of more than 0.96-inch. After the general assessment, the focus of the surveys shifted to areas falling within soil polygons mapped by AECOM.

All field surveys for determination of habitat suitability focused on consideration of constituent habitat elements (USFWS, 1996). These elements included actual pools, swales, adjacent upland features, flow patterns, and rim/basin geomorphology.

RESULTS

Proposed Alberhill Substation Site

No vernal pools, ephemeral pools, or other features that could potentially support the fairy shrimp species of concern were observed on site. Most of the south and southwest portions of the site are occupied by a horse ranch, while the remainder of the site has steep slopes dominated by upland scrub vegetation. A small constructed pond is present within a horse racetrack. The presence of bulrush (*Scirpus acutus*) and mulefat (*Baccharis salicifolia*) indicate permanently saturated or moist soils, effectively preventing any fairy shrimp species from completing their life cycle(s).

Proposed Alberhill 115kV Transmission Line

Most of the proposed alignment and 200-foot survey buffer is either developed, under development, or otherwise disturbed. The disturbed areas are either cleared, dominated by non-native grassland, or contain patches of Riversidian sage scrub or chaparral. Non-native grasslands within the alignment exhibit signs of recent disking. Cottonwood and willow (*Salix* sp.) dominate the San Jacinto River within the buffer area. A drainage dominated by coast live oak (*Quercus agrifolia*), occurs on Bundy Canyon Road between Edwards Road and Harvest Way East. Water is conveyed under Bundy Canyon Road via a culvert. No water was flowing within the drainage on April 29, 2010. Two minor drainages, one dominated by coast live oak, the other remnant Riversidian sage scrub, are located immediately adjacent to Beverly Street west of Upton Road. No water was flowing within either drainage on April 29, 2010. A minor drainage dominated by remnant Riversidian sage scrub is located on the west side of Murietta Road between Garbani Road and Melido Street. No water was flowing within this drainage on April 29, 2010.

Two potential ephemeral pools were observed within the buffer zone of the proposed Alberhill 115kV transmission line. These are identified as Depression #1 and Depression #2. Their locations are shown on Figure 3.

Depression #1 is about 16 square feet in size, located west of Mission Trail near its intersection with Victorian Lane, upslope from a culvert (Figures 4A and 4B) about 100 feet west of the transmission centerline. This depression is located within MSHCP Criteria Area Cell 3954. Although no water was present on April 29, 2010, the soil appeared damp and had mud cracks. On May 5, 2010, the depression was no longer damp. Plant species associated with the depression include cressa (*Cressa*

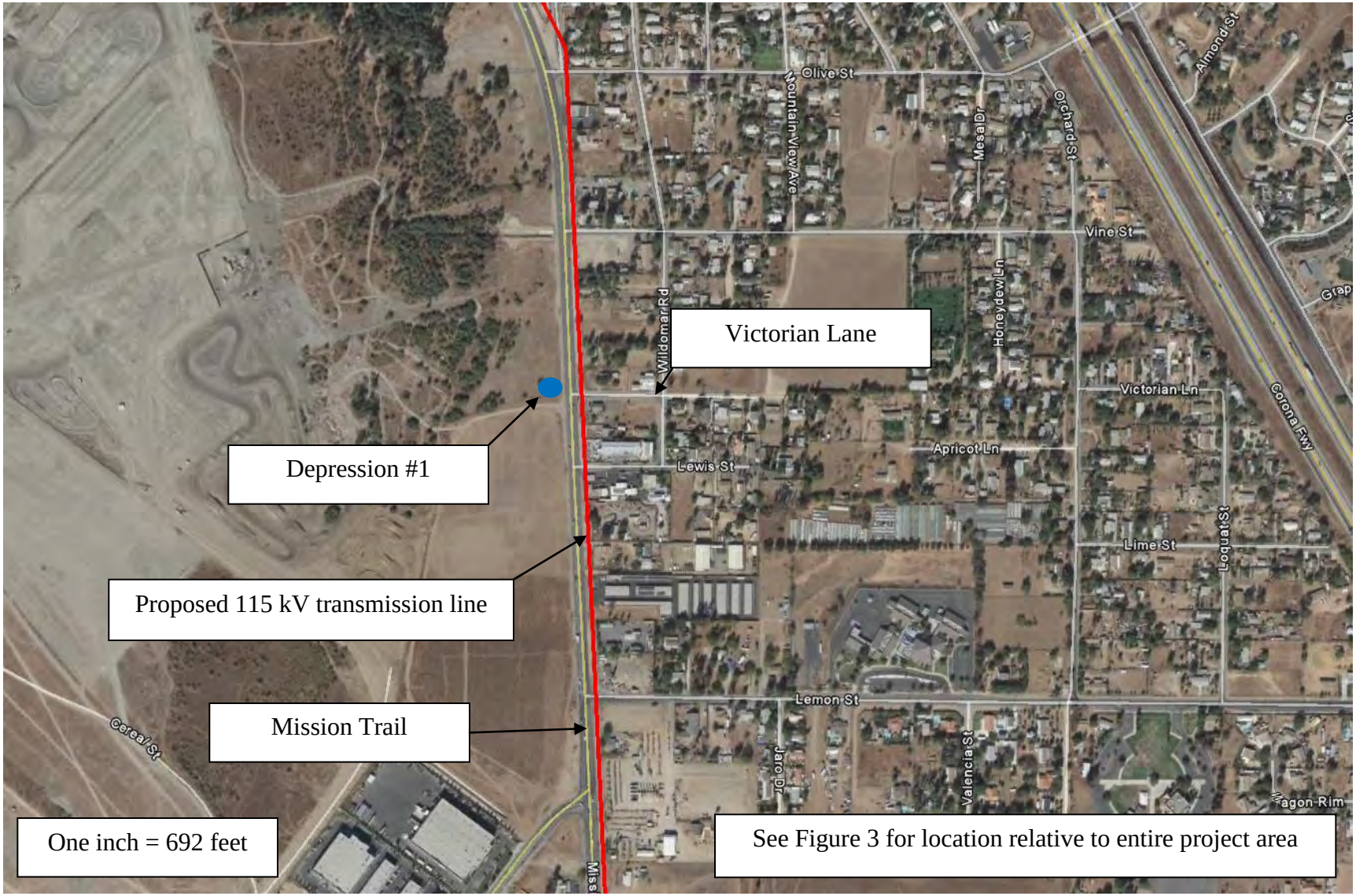
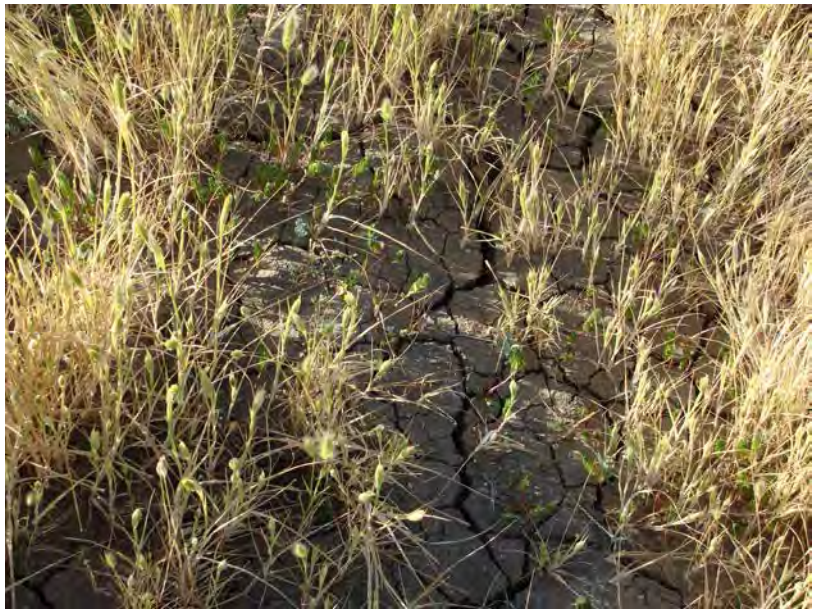


Figure 4A. Location of Depression #1 Northwest of Intersection of Mission Trail and Victorian Lane













Plants clockwise from top: *Cressa truxillensis*, *Polypogon monspeliensis*, *Spergularia rubra*, and unidentified herb, possibly a species of *Lythrum*.

Figure 4B. Photographs of Depression #1

truxillensis), purple sand spurry (*Spergularia rubra*), an unidentified herb (possibly *Lythrum* sp.), and non-native annual grasses (*Polypogon monspeliensis*, *Avena* sp., *Lolium* sp.). The two co-dominants, *Cressa truxilensis* (native forb) and *Polypogon monspeliensis* (non-native grass), are both considered facultative wetland species in California, with cressa often associated with low alkaline or saline soils and seasonally ponded conditions. The identity of the less frequently occurring herb could not be confirmed, but is suspected to be in the genus *Lythrum*. Many of the species in this genus are associated with ditches and seasonally wet areas.

Depression #2 is about 200 square feet in size and located south of Bundy Canyon Road at its intersection with Harvest Way East (Figures 5A and 5B), about 85 feet south of the transmission centerline. This depression is within MSHCP Criteria Area Cell 3970. On April 29 and May 5, 2010, water was present within two tire-ruts situated within a larger area of fine sediment that appeared to have settled out from water backed up above a culvert. The tire ruts and patterns on the ground suggested disking in the recent past. Observed flow patterns indicate that during rain events, there is sheet flow from Harvest Way East into the depression and then into a culvert at Bundy Canyon Road that is not well maintained. No vegetation was found within the tire ruts during the site visit, but these ruts were surrounded by dense non-native annual grassland dominated by ryegrass (*Lolium* sp.) and oat (*Avena* sp.).

No other vernal pools, swales, ephemeral pools, or stock ponds were observed within the buffer zone of the proposed Alberhill 115kV transmission line.

Proposed Alternative Alberhill 115kV Transmission Line

The majority of the alternative alignment and 200-foot buffer on each side of the centerline is either developed, under development, or otherwise disturbed. Riparian scrub dominated by cottonwood and willow lines a drainage located on Holland Road between Byers Road and Hawthorne Street. Surface water flow was noted on April 28, 2010. A small patch of willow also occurs in a minor drainage at the intersection of Byers Road and Rolling Hills Drive, which is otherwise dominated by non-native grassland and remnant Riversidian sage scrub. The patch of willow is limited to one or two individuals. No vernal pools, swales, ephemeral pools, or stock ponds are located within the alignment or buffer zone of the proposed Alberhill 115kV Alternative transmission line.



Figure 5A. Location of Depression #2 Southwest of Intersection of Bundy Canyon Road and Harvest Way East

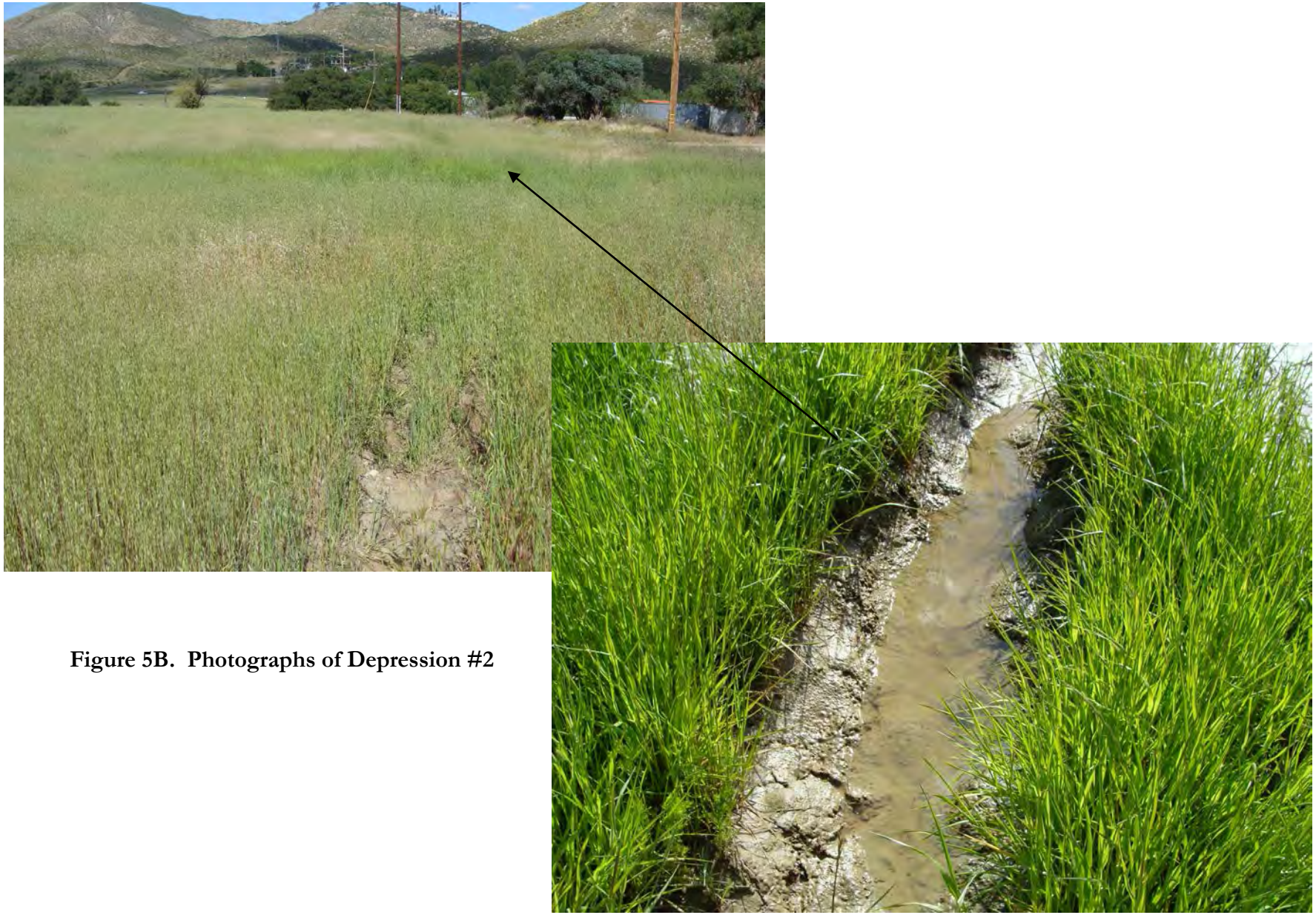


Figure 5B. Photographs of Depression #2

DISCUSSION AND RECOMMENDATIONS

The two depressions observed in the survey zone of the proposed Alberhill 115kV transmission line provide marginally suitable habitat for Riverside fairy shrimp and are unsuitable for Santa Rosa Plateau fairy shrimp. The potential for vernal pool fairy shrimp to occur in the two depressions within the buffer zone of the proposed transmission line is moderate depending on the inundation periods for each depression. It is recommended that all proposed project activities avoid both depressions to avoid potentially impacting vernal pool fairy shrimp. It is also recommended that all proposed project activities do not alter water flow into or out of the depressions.

If direct or indirect impacts to either depression cannot be avoided, the MSHCP requires the project applicant to:

1. Conduct a USFWS protocol vernal pool branchiopod (fairy shrimp) survey of the two depressions. If listed species are found during the survey, avoidance measures described in measure 2 shall be implemented in consultation with USFWS.
2. The project proponent shall implement avoidance and protection measures to protect any depression(s) found to contain populations of the Riverside fairy shrimp, vernal pool fairy shrimp, and/or the Santa Rosa Plateau fairy shrimp species during ground-disturbing activities. The project proponent shall install orange construction fencing ten feet from the perimeter of each depression, under the direct supervision of a qualified biologist familiar with vernal pool ecology. No ground-disturbing activities, equipment, materials, or personnel will be allowed within the fenced areas during construction, and no grading or dumping within the watershed of each depression will be allowed. Watersheds of the ponding features vary with topography and should be evaluated prior to implementation of avoidance measures.

If direct or indirect impacts cannot be avoided, the project applicant is also required to prepare a Determination of Biologically Equivalent or Superior Preservation Report (DBESP) under the MSHCP.

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APPENDIX 1

CNDDB RECORDS FOR FAIRY SHRIMP OCCURRENCE IN PROJECT AREA

Streptocephalus woottoni

Riverside fairy shrimp

Element Code: ICBRA07010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	**Global:** G1	**CDFG Status:**
State: None	**State:** S1	

Habitat Associations

General: ENDEMIC TO W RIV, ORA & SDG COUNTIES IN AREAS OF TECTONIC SWALES/EARTH SLUMP BASINS IN GRASSLAND & COASTAL SAGE SCRUB.

Micro: INHABIT SEASONALLY ASTATIC POOLS FILLED BY WINTER/SPRING RAINS. HATCH IN WARM WATER LATER IN THE SEASON.

Occurrence No. 19 **Map Index:** 51932 **EO Index:** 51932

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2001-XX-XX
Site: 2001-XX-XX

Record Last Updated: 2003-07-30

Quad Summary: Murrieta (3311752/068C)
County Summary: Riverside

Lat/Long: 33.59337º / -117.22089º
UTM: Zone-11 N3717093 E479504
Radius: 80 meters
Elevation: 1,350 ft

Mapping Precision: SPECIFIC
Symbol Type: POINT

Township: 07S
Range: 03W
Section: 05 **Qtr:** XX
Meridian: S

Location: SOUTH OF CLINTON KEITH ROAD & 1.2 MILES EAST OF I-15 AT OAK SPRINGS RANCH.

Location Detail: 0.2 ACRE ABANDONED STOCK POND

Ecological: POND WAS 2 FT X 6 FT AND 2 INCHES DEEP WITH HIGH TURBIDITY.

Threat: AREA PROPOSED FOR DEVELOPMENT

General: A FEW HUNDRED ESTIMATED TO EXIST IN POND. 7 INDIVIDUALS COLLECTED AS VOUCHERS.

Owner/Manager: PVT

Streptocephalus wootoni

Riverside fairy shrimp

Element Code: ICBRA07010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	**Global:** G1	**CDFG Status:**
State: None	**State:** S1	

Habitat Associations

General: ENDEMIC TO W RIV, ORA & SDG COUNTIES IN AREAS OF TECTONIC SWALES/EARTH SLUMP BASINS IN GRASSLAND & COASTAL SAGE SCRUB.

Micro: INHABIT SEASONALLY ASTATIC POOLS FILLED BY WINTER/SPRING RAINS. HATCH IN WARM WATER LATER IN THE SEASON.

Occurrence No. 8 **Map Index:** 39240 **EO Index:** 34242

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1998-03-22
Site: 1998-04-29
Record Last Updated: 1998-07-28

Quad Summary: Murrieta (3311752/068C)
County Summary: Riverside

Lat/Long: 33.60552º / -117.22531º
UTM: Zone-11 N3718440 E479097
Radius: 80 meters
Elevation: 1,510 ft
Mapping Precision: SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 03W
Section: 31 **Qtr:** NE
Meridian: S

Location: 3 MILES NORTH OF INTERSECTION OF WASHINGTON AVE & LEMON ST IN MURRIETA, & 1.2 MILES NE OF OAK SPRINGS RANCH.

Location Detail: POND IS OFFSITE TO NORTH OF SCHLEUNIGER PROPERTY. SLIDE OF THIS SITE IN THE FILE.

Ecological: VERNAL POOL IN GRASSLAND AND SCRUB (FROM PHOTO SENT WITH FIELD SURVEY FORM)

Threat: NEARBY DEVELOPMENTS & AGRICULTURE.

General: POOL IS NORTH OF PROJECT SITE. 100'S TO 1000'S OBSERVED. COLLECTION DEPOSITED IN CALIF ACADEMY OF SCIENCES.

Owner/Manager: PVT

Streptocephalus woottoni

Riverside fairy shrimp

Element Code: ICBRA07010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	**Global:** G1	**CDFG Status:**
State: None	**State:** S1	

Habitat Associations

General: ENDEMIC TO W RIV, ORA & SDG COUNTIES IN AREAS OF TECTONIC SWALES/EARTH SLUMP BASINS IN GRASSLAND & COASTAL SAGE SCRUB.

Micro: INHABIT SEASONALLY ASTATIC POOLS FILLED BY WINTER/SPRING RAINS. HATCH IN WARM WATER LATER IN THE SEASON.

Occurrence No. 11 **Map Index:** 41872 **EO Index:** 41872

Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1998-02-05
Site: 1998-02-05
Record Last Updated: 1999-11-10

Quad Summary: Lake Elsinore (3311763/069A)
County Summary: Riverside

Lat/Long: 33.65454º / -117.30825º
UTM: Zone-11 N3723895 E471418
Radius: 1/10 mile
Elevation: 1,260 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 06S
Range: 04W
Section: 16 **Qtr:** NW
Meridian: S

Location: BACK BASIN OF LAKE ELSINORE, NW OF SEDCO HILLS.

Location Detail: POOL IS LOCATED IN AN AREA THAT HAS BEEN GRADED.

Ecological: HABITAT CONSISTS OF AN ARTIFICIAL VERNAL POOL IN THE LAKE ELSINORE BACK BASIN. POOL IS 0.937 ACRE IN SIZE AND 20 INCHES DEEP.

Threat: THREATS INCLUDE ORV USE AND POTENTIAL DEVELOPMENT.

General: 10K+ OBSERVED ON 5 FEB 1998. COLLECTION DEPOSITED IN LACM. BRANCHINECTA LINDAHLI ALSO FOUND HERE.

Owner/Manager: UNKNOWN

Streptocephalus woottoni

Riverside fairy shrimp

Element Code: ICBRA07010

Status	NDDB Element Ranks	Other Lists
Federal: Endangered	**Global:** G1	**CDFG Status:**
State: None	**State:** S1	

Habitat Associations

General: ENDEMIC TO W RIV, ORA & SDG COUNTIES IN AREAS OF TECTONIC SWALES/EARTH SLUMP BASINS IN GRASSLAND & COASTAL SAGE SCRUB.

Micro: INHABIT SEASONALLY ASTATIC POOLS FILLED BY WINTER/SPRING RAINS. HATCH IN WARM WATER LATER IN THE SEASON.

Occurrence No. 24 **Map Index:** 47233 **EO Index:** 57829

Occ Rank: Good
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-06-08
Site: 2002-06-08
Record Last Updated: 2004-11-01

Quad Summary: Romoland (3311762/068B)
County Summary: Riverside

Lat/Long: 33.64182º / -117.15314º
UTM: Zone-11 N3722453 E485799
Area: 1.2 acres
Elevation: 1,485 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 06S
Range: 03W
Section: 13 **Qtr:** SW
Meridian: S

Location: IMMEDIATELY NORTHEAST OF INTERSECTION OF MENIFEE AND SCOTT ROADS, 1.2 AIR MILES SOUTH OF BELL MOUNTAIN, NEAR MENIFEE.

Location Detail: IN A VERNAL POOL IN AN AGRICULTURAL FIELD.

Ecological: BASIN IS DOMINATED BY EPILOBIUM PYGMAEUS, ELEOCHARIS GENICULATA, POLYGONUM ARENARIUM, NAVARRETIA FOSSALIS. OTHER ASSOCIATES INCLUDE LYTHRUM HYSSOPIFOLIUM, CRYPSIS SCHOENOIDES.

Threat: DISTURBED BY TILLING ASSOCIATED WITH FARMING. POSSIBLY THREATENED BY FUTURE DEVELOPMENT OF SITE.

General: SEVERAL S. WOOTTONI CYSTS TAKEN FROM DRY SEASON SOIL SAMPLES; 4 FROM SAMPLE 2.1, 1 FROM SAMPLE 3.2, AND 1 FROM SAMPLE 8.1. ECOLOGICAL AND THREAT INFORMATION TAKEN FROM DATA FOR OCCURRENCE 31 OF ORCUTTIA CALIFORNICA.

Owner/Manager: PVT

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REVISED FINAL
ALBERHILL SYSTEM PROJECT
2010 FOCUSED SURVEYS FOR LEAST BELL'S VIREO AND SOUTHWESTERN WILLOW FLYCATCHER



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October 2010

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List of Acronyms

CDFG	California Department of Fish and Game
kV	kiloVolt
LBV	least Bell's vireo
Project	Alberhill System Project
SCE	Southern California Edison
SJR	San Jacinto River
SSC	Species of Special Concern
Sub	subtransmission
SWF	southwestern willow flycatcher
T/L	transmission line
USFWS	U.S. Fish and Wildlife Service
WIFL	willow flycatcher

Executive Summary

This report summarizes the results of a focused survey completed by AECOM for the Alberhill System Project (Project) in Riverside County, California. The survey was conducted for two federally and state listed riparian bird species known to breed in the southern California region, the least Bell's vireo (*Vireo bellii pusillus*) (LBV) and the southwestern willow flycatcher (*Empidonax traillii extimus*) (SWF). The surveys for both species were performed concurrently and were completed between April 26 and July 26, 2010. The surveys followed protocol established for these species by the U.S. Fish and Wildlife Service (USFWS).

1.0 Project Description

Southern California Edison (SCE) proposes to construct the Alberhill System Project (Project) to serve current and projected demand for electricity and to maintain electric system reliability in southwestern Riverside County, including the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar, as well as the surrounding unincorporated areas.

The Project Area is defined as the area analyzed for the following Project components: the proposed Alberhill Substation, the proposed 500 kiloVolt (kV) transmission lines (T/Ls), the proposed 115-kV subtransmission (Sub) T/L, and the alternative 115-kV Sub T/L (Figure 1).

- The horse ranch and adjacent undeveloped areas compose the Alberhill Substation survey area.
- The proposed 500 kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500 kV T/L.
- The proposed 115 kV Sub T/L would consist of a new 115 kV Sub T/L and modification of the existing 115 kV Sub T/L.
- An alternative to the proposed 115 kV Sub T/L has also been analyzed (alternative 115 kV Sub T/L). This alternative consists of an optional routing of the eastern portion of the proposed 115 kV Sub T/L.

The surveys investigated all areas within the Project Area having potentially suitable habitat for least Bell's vireo (*Vireo bellii pusillus*) (LBV) and southwestern willow flycatcher (*Empidonax traillii extimus*) (SWF) in the proposed and alternative 115 kV sub T/L segment that are anticipated to be directly or indirectly impacted by the proposed Project. The survey area included a buffer area of at least 200 feet around the Project's direct limits of disturbance. The elevation of the various survey sites investigated ranged from 1,267 feet to 1,772 feet above mean sea level. Figures 1-1 and 2-1 through 2-7 show the Project's regional location and specific LBV and SWF survey locations, respectively.

1.1 Species Descriptions

The **least Bell's vireo** is one of four subspecies of the Bell's vireo, a small, insectivorous, migratory songbird. The breeding range of LBV is currently restricted to southwestern California and northwestern Baja California, although it historically bred extensively into the Central Valley of California (USFWS 1998). It is thought to winter primarily in southern Baja California. Loss and degradation of breeding habitat and brood parasitism by the brown-headed cowbird (*Molothrus ater*) are considered major factors resulting in the decline of the LBV population in California. Habitat conversion for agriculture and development has removed much of the riparian woodlands required for nesting by LBV and other riparian-dependent birds. Flood control measures and channelization have also depleted important habitat for riparian species. Grazing by cattle has impacted habitat suitability by removing or thinning the understory vegetation that is required by many riparian nesting birds, including LBV. Additionally, the presence of livestock generally leads to increased cowbird populations and, in turn, increased pressure from brood parasitism in local songbird populations.

The significant reduction in the population size and range of LBV resulted in its listing by the California Department of Fish and Game (CDFG) as endangered in June 1980 and by the United States Fish and

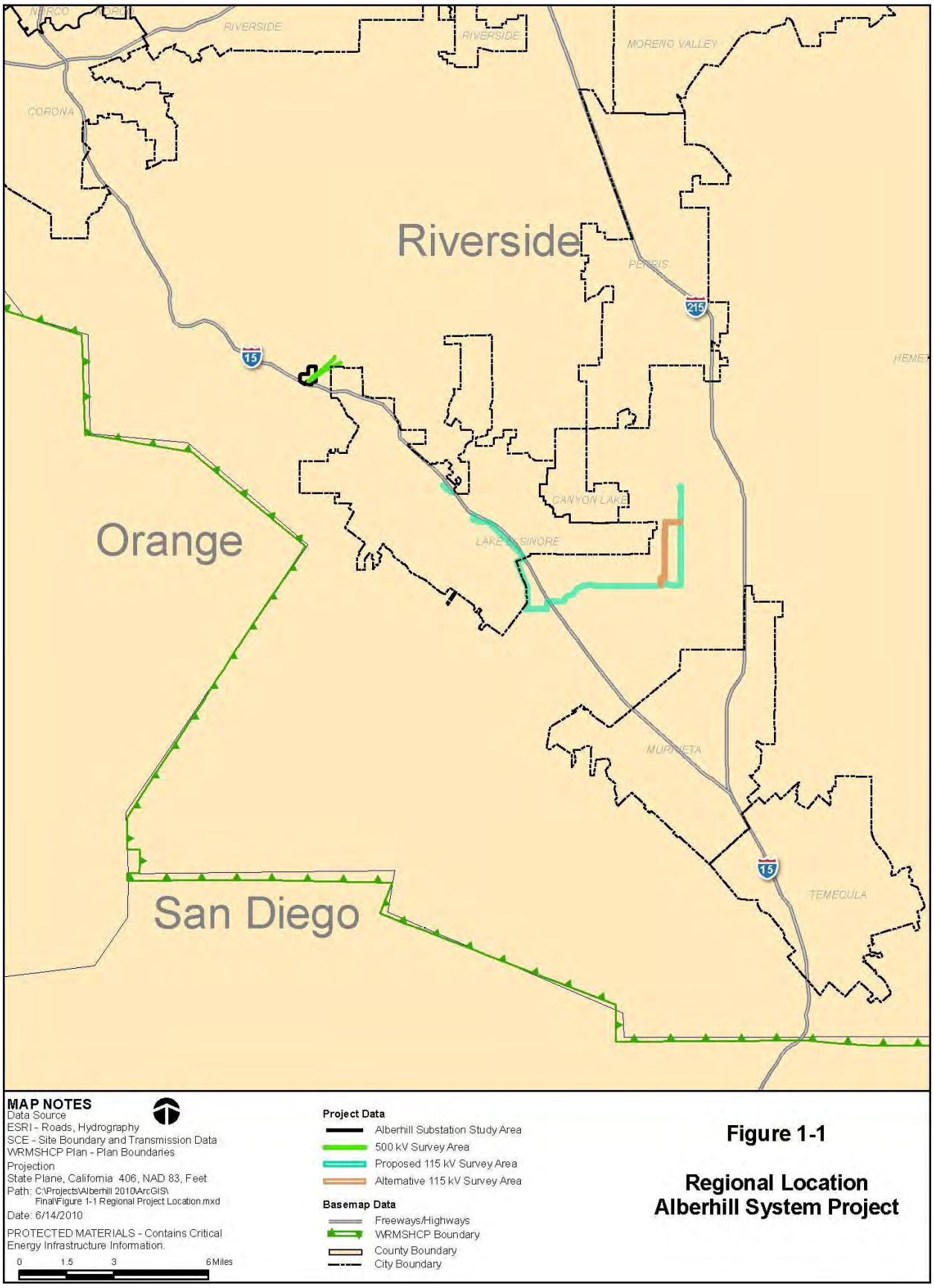


Figure 1-1

Regional Location
Alberhill System Project

Wildlife Service (USFWS) as endangered in May 1986. Since the early 1990s, however, many LBV populations have demonstrated fairly significant growth, especially those having received conservation and management efforts. Census data from 1986 indicated that an estimated 300 pairs existed in southern California, but by 2000 the estimate had risen to a total of 2,000 pairs (USFWS 2001). Extensive cowbird trapping and habitat restoration are presumed to be the primary factors contributing to this recent recovery trend. LBV has been reoccupying large portions of its former range in southern California, and in 2005 a pair of LBV successfully bred in the San Joaquin Valley, the first such occurrence in this area in many decades.

The LBV prefers riparian habitat with a dense understory of young willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), Mexican elderberry (*Sambucus mexicana*), California rose (*Rosa californica*), desert wild grape (*Vitis girdiana*), and a variety of other shrubby species. The LBV is generally found in riparian areas that are dominated by one or more willow species, especially where a mixed age composition occurs. These areas frequently include other trees such as cottonwood (*Populus* spp.) or California sycamore (*Platanus racemosa*), particularly where the canopy is within or immediately adjacent to an understory layer of vegetation (Salata 1983). One analysis indicated that LBV prefers stratified vegetation with low amounts of aquatic and herbaceous cover (RECON 1990). Another ecological variable is the width of the willow riparian woodland. LBV exhibits a clear preference for relatively broad woodlands, which typically exhibit more stratification of vegetation. It was noted that an increase in occupied habitat occurs as the width of the willow riparian woodland exceeds 50 meters wide versus 10 meters or less (RECON 1990). As local populations continue to expand, however, and occupy the remaining areas of more typical habitat, a higher incidence appears of LBV using lower quality or "marginal" habitats.

The core of the LBV range in southern California has been in San Diego County, which continues to support several significant populations. Another substantial population has been in the Prado Basin, in southwestern Riverside County (approximately 25 miles northwest of Lake Elsinore), where a total of 538 LBV territories were recorded in 2009 (Jim Pike, personal communication with Doug Willick, August 5, 2010). The Santa Ana River upstream and downstream of Prado Basin has also been known to support increasing numbers of LBV in recent years. Although many local populations have apparently leveled off in recent years (such as in San Diego County and Prado Basin), this may be the result of areas with suitable LBV habitat reaching saturation levels.

The **southwestern willow flycatcher** is a small, olive-colored, migratory songbird. One of four commonly recognized subspecies of the willow flycatcher, the SWF was listed as a federally endangered species by the USFWS in March 1995. In addition, all willow flycatcher subspecies that nest in California (including SWF and two other subspecies in northern California) are considered state endangered by CDFG. The breeding range of SWF includes southern California, Arizona, New Mexico, southwestern Colorado, extreme southern portions of Nevada and Utah, and (possibly) western Texas (Sogge et al. 1997). As with other willow flycatcher subspecies, its winter range occurs south of the United States. Throughout its range, the SWF is one of the latest migratory species to arrive on its breeding grounds (Garrett and Dunn 1981). In southern California, it is present from early to mid May through August and possibly early September.

The identification of SWF in the field is quite difficult due to its close resemblance to other flycatcher species in the *Empidonax* genus. In addition, due to extreme similarity of appearance and vocalizations, it is not possible to positively identify the various willow flycatcher (WIFL) subspecies in the field. Populations of other subspecies of WIFL (e.g., *E.t. brewsteri* and *E.t. adastus*, which breed as far north as southwestern Canada) are apparently maintaining stable populations. They are widespread during migration and can be encountered at this time in SWF breeding habitat, as well as in a variety of other native and nonnative habitats (Garrett and Dunn 1981, Hamilton and Willick 1996). In fact, at the species level, WIFLs currently occur as fairly common migrants in southern California, although these birds are all assumed to belong to the more common, northerly-breeding subspecies. It is currently recognized, however, that the SWF subspecies is the only one known to breed in southern California. Consequently,

SWF surveys extend through the breeding season to differentiate the SWF from other purely migratory subspecies of willow flycatcher. The survey protocol's increased frequency of site visits between June 20 and July 17 is intended to increase the likelihood of detecting any SWF that may be present in a survey area at a time when no other WIFL subspecies is expected to be present in southern California.

Breeding habitat for SWF is restricted to dense, well-developed riparian woodland, from sea level in California to approximately 8,000 feet in Arizona. Typically this habitat occurs near surface water or saturated soil (Sogge et al. 1997). Sogge et al. (1997) suggest that nesting habitat for SWF typically includes patches at least two acres or greater in extent, with linear-shaped habitats at least 10 meters (33 feet) wide. Specific habitat characteristics, such as species composition and diversity, dominant vegetation, and vegetative structure, have been found to be quite varied. For many years, SWF breeding habitat in California was thought to be generally limited to willow dominated riparian communities (Garrett and Dunn 1981, Grinnell and Miller 1944). In southern California, however, more recent work (e.g., Robert McKernan, Bill Haas) has revealed this species occasionally occupying habitats dominated by alders (*Alnus rhombifolia*), coast live oak (*Quercus agrifolia*), and other species. Along the lower Colorado River, salt cedar (*Tamarix ramosissima*) dominated habitats are known to support substantial numbers of SWF breeding territories (McKernan and Braden 1999).

Historically, the SWF was considered a common summer resident in appropriate habitat throughout the state of California (Grinnell and Miller 1944). In recent decades, however, this taxon experienced significant population declines. In 1997, the known breeding population was estimated at between 300 and 500 pairs, with only a small percentage of this total occurring in California (Sogge et al. 1997). Since then, most of the California populations have shown no evidence of improvement. Similar to LBV, the SWF's decline throughout its range is widely attributed to habitat loss, habitat degradation, and brood parasitism by the brown-headed cowbird. Although the willow flycatcher as a species is a fairly common migrant through southern California, these birds are assumed to belong to the more common subspecies breeding as far north as southwestern Canada.

1.2 Methods

The survey protocol for SWF and LBV followed guidelines provided for these species by the USFWS. The SWF protocol, as revised in 2001, specifies a total of five site visits to areas with potential habitat for the flycatcher. These visits are to be conducted during three separate time periods, with successive surveys at any site at least five days apart. The three time periods identified for SWF surveys are as follows: May 15 through 31 (one site visit), June 1 through 21 (one site visit), and June 22 through July 17 (three site visits). Three of the site visits are conducted during the last survey period as this is the best period to verify the summer resident status of SWF and eliminate the possibility of other strictly transient (in southern California) subspecies of willow flycatcher. Guidelines adopted by the USFWS for LBV surveys specify eight visits between April 10 and July 31, with a minimum of 10-day intervals between site visits. Combining protocol survey recommendations for both SWF and LBV results in a total of nine site visits conducted between April 10 and July 31. The protocol for LBV requires a maximum survey area per biologist per day of three linear kilometers (1.86 miles) or 50 hectares (123 acres). The combined acreage of all LBV/SWF survey sites for the Project was considerably less than these limits.

For the SWF, survey protocol requires that SWF song recordings be broadcast at regular intervals in areas of suitable habitat to optimize the potential for the detection of this species. Due to the potential for these recordings to adversely impact nesting activity, and the difficulty in finding and identifying SWF, USFWS requires that the surveying biologist be in possession of a current endangered species [Section 10(a)(1)(A)] permit that authorizes survey activities for SWF. No endangered species permit is required to conduct surveys for LBV, and the use of song recordings is not required for this species. All surveys were performed by AECOM avian biologist Doug Willick, who is permitted to conduct surveys for SWF (permit #TE-821404-5).

Concurrent with the LBV/SWF survey, the project site was assessed for other special status riparian birds. Based on habitat present in at least portions of the Project's survey area, other special status riparian birds with some potential to occur include yellow warbler (*Dendroica petechia*) and yellow-breasted chat (*Icteria virens*). These species are considered California Species of Special Concern (SSC) by CDFG. A compendium of all bird species recorded during this focused riparian bird survey is included at the end of this report (Appendix A).

Surveys were performed by slowly walking through, or along, all areas of suitable habitat for LBV and SWF and stopping and listening periodically to detect song and/or other vocalizations. Surveys were conducted primarily during morning hours. The surveys avoided weather conditions (e.g., excessive wind, heat, rain, fog) that would not be conducive to the detection of LBV and SWF or small songbirds in general. Table 1-1, below, identifies the survey dates, time of day during which the survey was conducted, and the weather conditions during the survey.

Table 1-1. Survey Details and Conditions

Date	Time of Day	Survey Conditions
4/26/2010	0930-1500	Clear (throughout survey). Temps from 70° to mid 80°s, with mild to moderate (2-8 mph) S.W. winds.
4/28/2010	0730-1315	Partly cloudy most of day, especially a.m. (front passing through overnight). Some rain in early a.m. hours. 50°s to high 60s. S.W. winds from 2-10 mph.
5/10/2010	0920-1350	Cloudy to partly cloudy throughout survey (30-75% c.c.). 67° at start of survey. Low to mid 70°s at end. Variable winds throughout day, at 2-6 mph.
5/24/2010	0840-1240	10-20% c.c., low 60°s, 0-3 mph winds at start. Still 20% c.c. and only low 70°s at end, with 3-6+ mph S.W. winds.
6/4/2010	0810-1240	Clear (throughout survey), 70°, and calm at start. Mid 80°s, with 3-8 mph (S.W.?) winds at end.
6/16/2010	0830-1230	Unusually mild weather: clear (throughout survey), 67° and 0-3 mph S.W. winds at start. Low to mid 70°s, and 2-5 mph winds, at end.
6/25/2010	0750-1149	Clear (throughout survey), 66° and calm at start. Mid 80°s, with 2-3 mph S.W. winds at end.
7/1/2010	0800-1200	Clear (throughout survey), 72°and generally calm at start. 86°, 2-3 mph S.W. winds at end.
7/16/2010	0745-1115	Appeared to have rained during previous evening. 20% c.c. (mainly over mountains to west), 79°, calm and humid at start. Clear, 93°, 2-4 mph winds (direction not noted) at end.
7/26/2010	0751-1158	Overcast (low clouds) early, becoming less than 20% c.c. by 0915. 67°, 1-4 mph S.W. winds at start. High, thin clouds moving in from south during late a.m., becoming 40% c.c. at end of survey (and 75°, 2-4 mph winds).

All temperatures are in degrees Fahrenheit

Abbreviations
c.c = cloud cover
mph = miles per hour

1.3 Habitat Assessment

During the initial site visit for this survey, the AECOM avian biologist, Doug Willick, examined all areas within the 115-kV portion of the Project Area that had previously been mapped as riparian woodland or riparian scrub habitats. This initial habitat assessment was conducted in order to identify all sites of potentially suitable LBV/SWF breeding habitat within the study area. The primary criteria used to evaluate the suitability of riparian related habitats included the following:

Species composition and structure. Although both LBV and SWF are known to utilize a variety of riparian trees and shrubs in habitat occupied by breeding birds, certain species (e.g., willows and mule fat) are more commonly found when LBV and SWF are present. Conversely, some riparian habitats (native or nonnative) are not typically favored by nesting LBV and SWF, such as those dominated by white alder (*Alnus rhombifolia*) and giant reed (*Arundo donax*). Both birds typically occupy habitat with a diverse structure that includes a variety of young to moderate aged trees and a fairly dense, shrubby understory.

Habitat condition. Habitat condition, or quality, can be an important factor in whether or not a particular site would provide potential nesting habitat for LBV or SWF. Cattle grazing, flooding, or human disturbance, for example, can degrade or eliminate the understory component of a riparian area and substantially reduce its suitability for these species.

Minimum habitat size. The overall extent of potential LBV/SWF habitat that is available at a given site may limit its suitability as breeding habitat. Although the area occupied by a LBV or SWF breeding territory will vary, minimum territory sizes for each species are generally at least 0.5 acre, and usually much larger (Sogge et al. 2010; Kus et al. 2010). Therefore, patches of potentially suitable habitat smaller than 0.5 acre will likely be unsuitable as breeding habitat for these species.

Isolation of Habitat. The extent of potentially suitable habitat is especially important when an area is completely isolated by extensive areas of unsuitable habitat. Therefore, the more a patch of potentially suitable habitat might be isolated, the more important it is that the habitat patch be of sufficient size to support a breeding territory.

2.0 Survey Results

Based on the initial habitat assessment conducted in the 115-kV segment of the Project's study area, a total of 11 sites were determined to have limited to moderate potential to support LBV and/or SWF (Figures 2-1 through 2-7). In summary, approximately four of the sites appeared to have moderate potential to support LBV breeding habitat, while the remaining seven sites were considered to be only marginally suitable for this species. For SWF, due to their preference for more mesic riparian communities, only one site (i.e., CWR2-1, Figure 2-1) was considered to have at least marginal potential for SWF breeding habitat. The remainder of the sites were not considered suitable breeding habitat for SWF. Characteristics of the individual survey sites that were examined during this survey will be discussed in more detail below.

2.1 Least Bell's Vireo

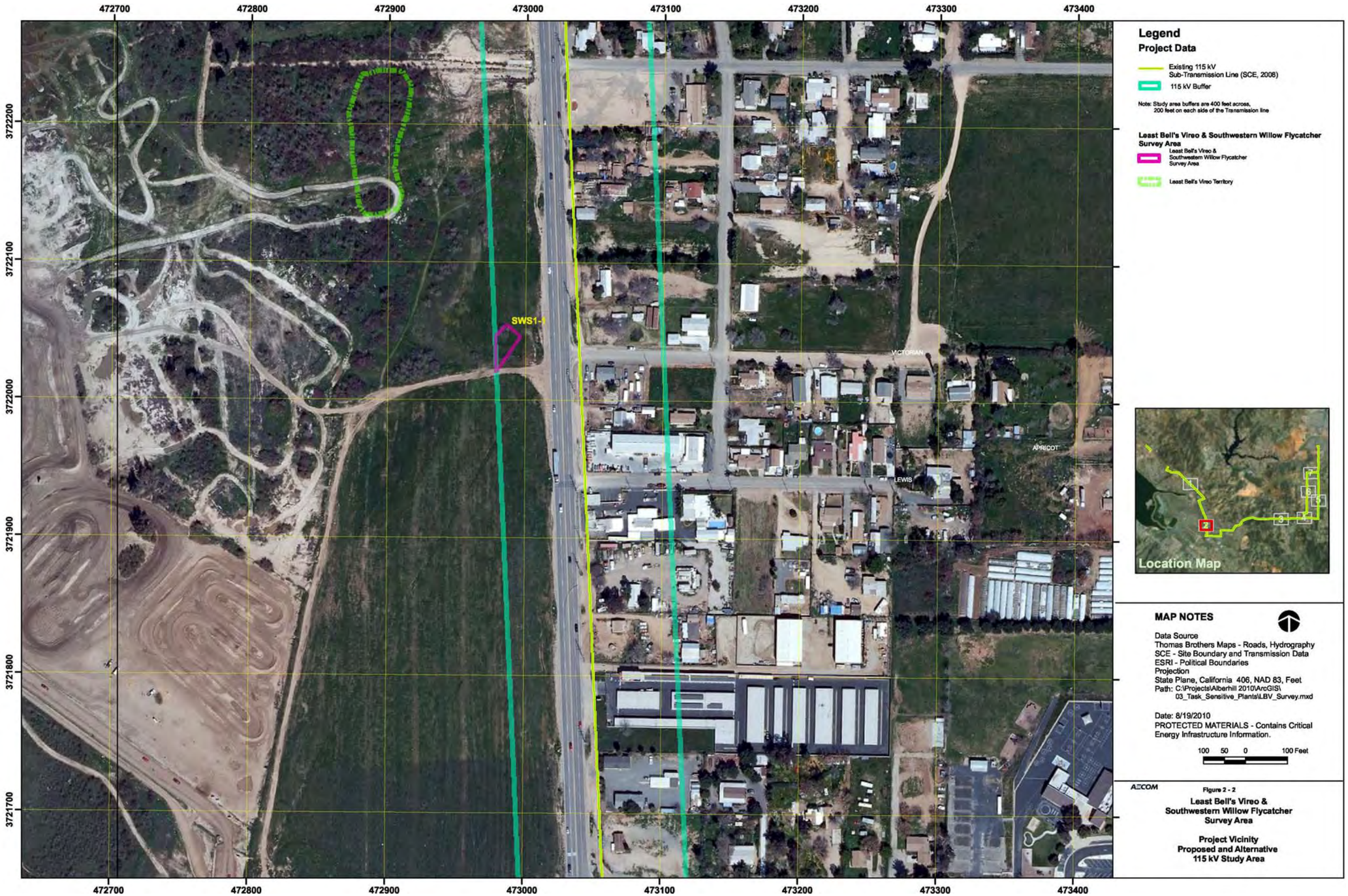
Although no LBV were located within any of the survey sites, individual LBV territories were recorded in fairly close proximity to two of the sites. While conducting the first site visit at CWR2-1 (April 26, 2010), a singing male LBV was initially heard, and later observed, in relatively mature willow-cottonwood riparian habitat immediately upstream of CWR2-1. This individual was recorded on all subsequent visits with the exception of June 10, July 1, and July 16, 2010. Although this territorial bird occasionally roamed as close as 30 feet from the closest edge of the CWR2-1, it was never detected within this survey site and was usually about 150 feet to 300 feet upstream of CWR2-1. Prior to the last survey, it was suspected that this represented a bachelor male territory, as no other LBV were detected at this location. However, during the last visit, on July 26, 2010, two LBVs were found here, including a silent bird that showed evidence of heavy molt along with missing tail feathers, and a singing bird with a full tail. Based on the July 26 observations, it is not clear whether a pair or just a bachelor male had maintained the LBV territory immediately upstream of CWR2-1. It is not unusual for LBV to begin local dispersal in mid to late summer. This may be more typical of older juveniles, although adults (e.g., failed breeders or unpaired birds) may also begin dispersing at this time of year.

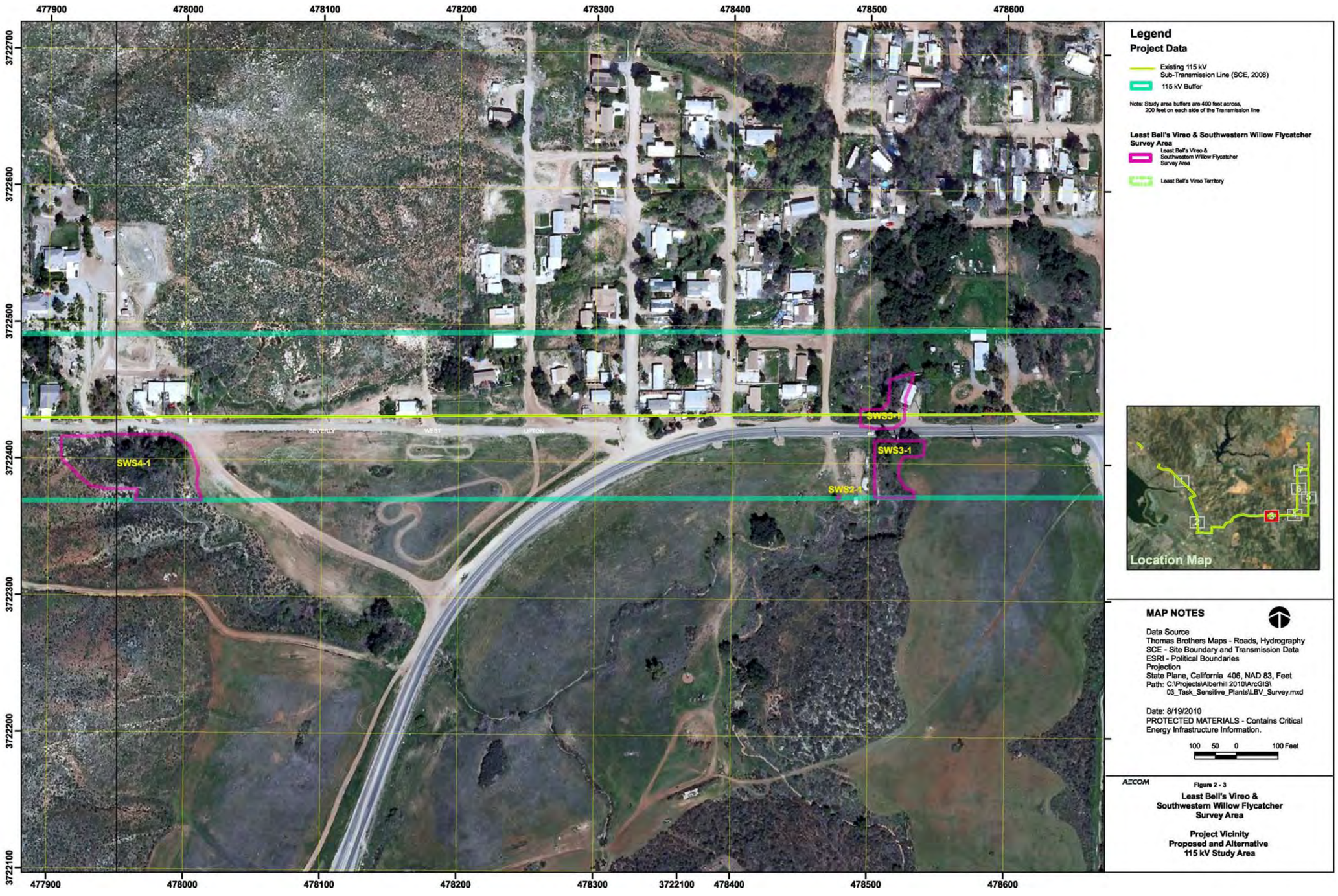
The second LBV territory to be recorded during this survey occurred during the first site visit to SWS1-1. A LBV was heard singing, and later seen, in riparian scrub roughly 550 to 600 feet north-northwest of this small survey site. On subsequent visits, the LBV was heard singing as close as approximately 400 feet northwest of SWS1-1 (Figure 2-2). This LBV was found on three of the first four site visits (i.e., April 26 and 28, and May 24, 2010) but was not detected on any subsequent visits. During all three visits when it was known to be present, the bird sang consistently and was therefore easy to locate. Due to the presumed brevity of this bird's presence in the vicinity of SWS1-1, and the fact that no other LBV could be detected at this location, it is suspected that this territory was occupied by a single bachelor male. No other LBVs were found during this survey.

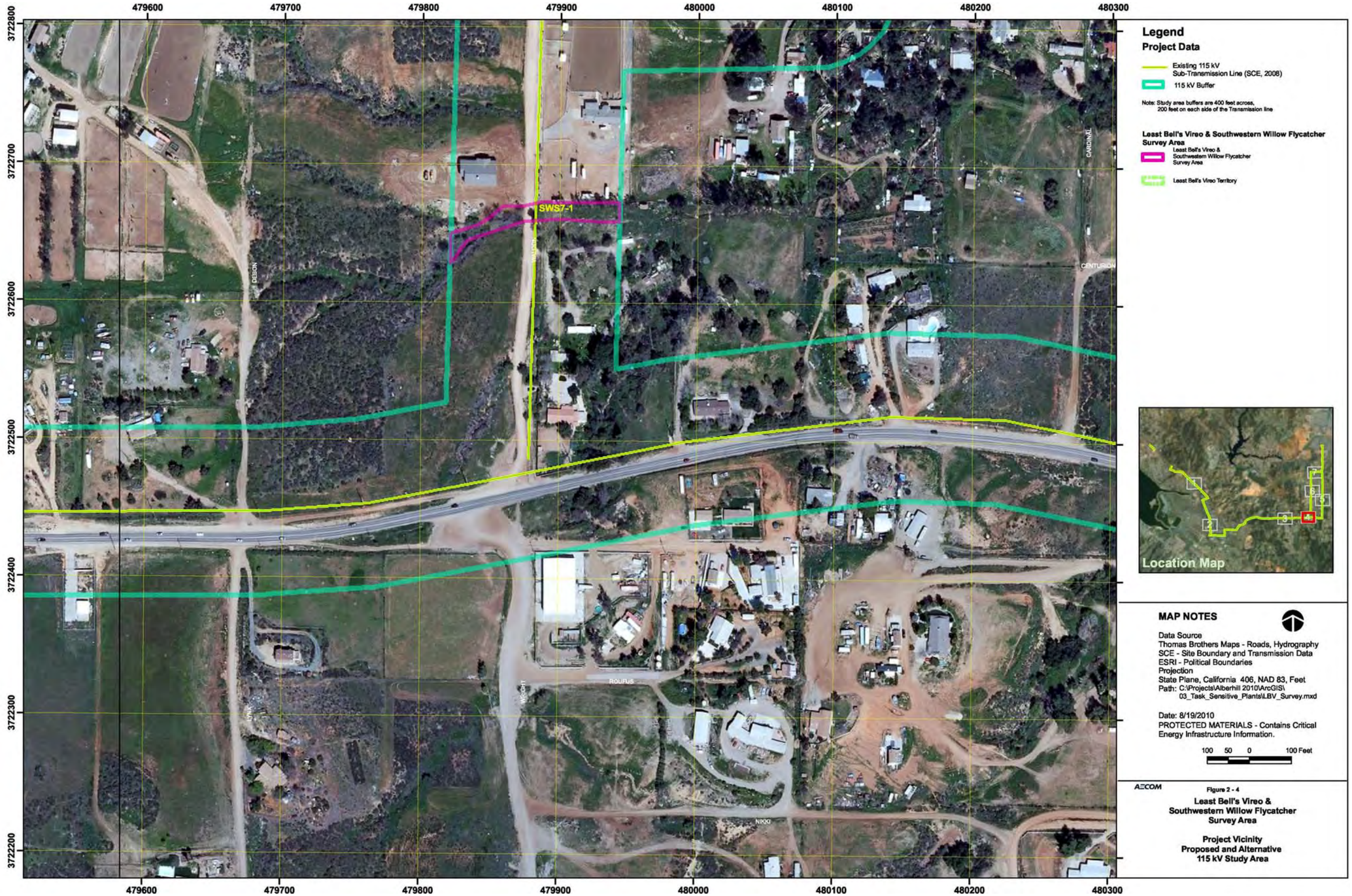
2.2 Southwestern Willow Flycatcher

No SWF were detected during this survey, including on both the survey sites and the areas adjacent to the sites. As stated above, CWR2-1 was the only site that appeared to show several of the characteristics of SWF breeding habitat. Therefore, CWR2-1 was the only site where the full SWF survey protocol was employed. The remaining sites were considered unsuitable as SWF breeding habitat due to the lack of surface water and often very limited extent and fairly sparse structure of the riparian vegetation.


471600
471700
471800
471900
472000
472100
472200
472300
3725100
3725000
3724900
3724800
3724700
3724600
CWR2-1
TS-1
SAN JACINTO RIVER
RAILROAD CANYON
CASINO
DAWES
LAKESHORE
Legend
Project Data
Existing 115 kV Sub-Transmission Line (SCE, 2008)
115 kV Buffer
Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo Territory
Location Map
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\03_Task_Sensitive_Plants\LBV_Survey.mxd
Date: 8/19/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
100 50 0 100 Feet
AECOM
Figure 2 - 1
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Project Vicinity
Proposed and Alternative
115 kV Study Area

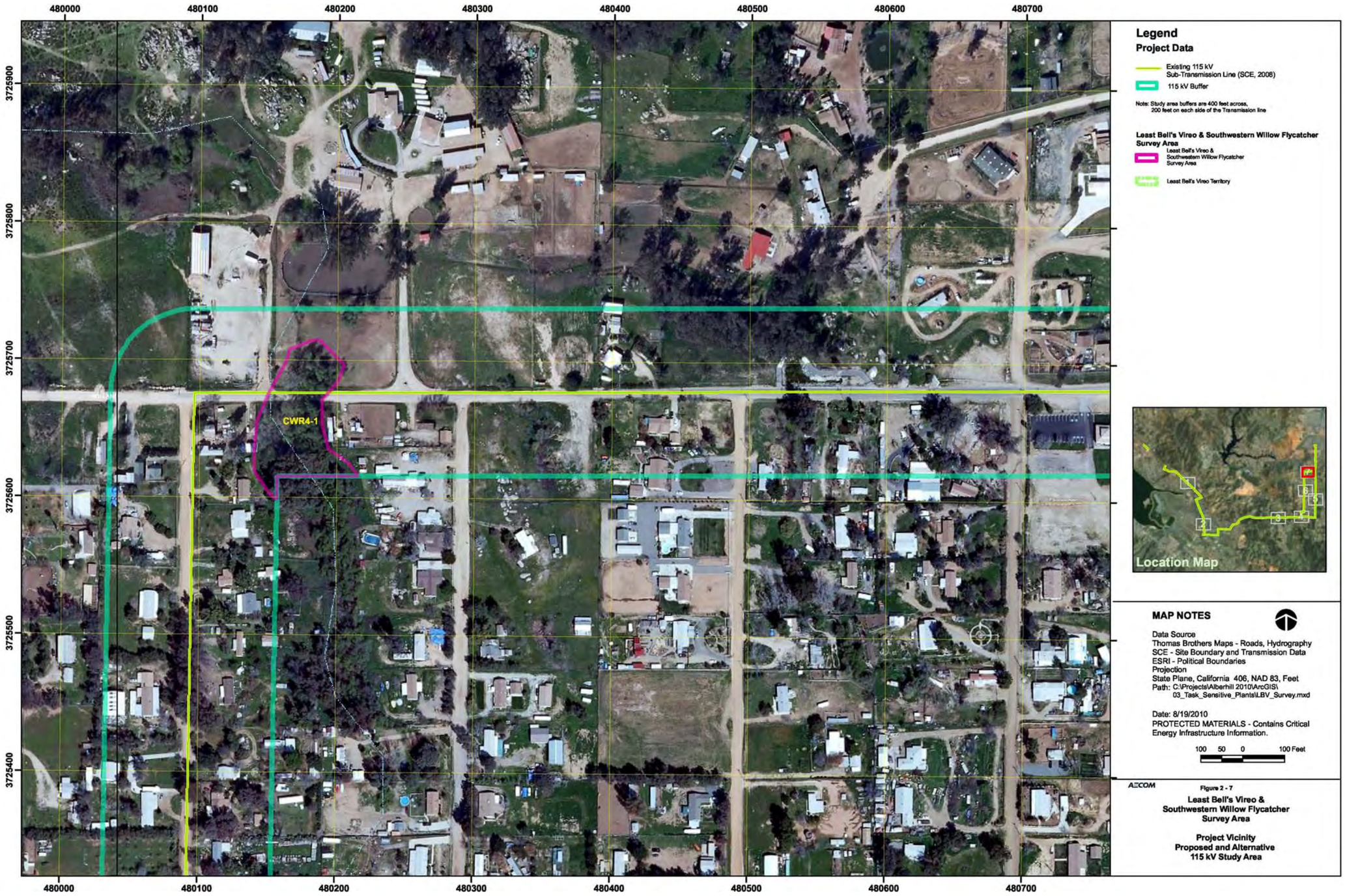

472700
472800
472900
473000
473100
473200
473300
473400
3722200
3722100
3722000
3721900
3721800
3721700
SWS1-1
VICTORIAN
APRICOT
LEWIS
Legend
Project Data
Existing 115 kV Sub-Transmission Line (SCE, 2008)
115 kV Buffer
Notes: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo Territory
Location Map
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
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Date: 8/19/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
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AECOM
Figure 2 - 2
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Project Vicinity
Proposed and Alternative
115 kV Study Area


477900
478000
478100
478200
478300
478400
478500
478600
3722700
3722600
3722500
3722400
3722300
3722200
3722100
SWS4-1
SWS3-1
SWS2-1
SWS3-1
BEVERLY
WEST
UPTON
Legend
Project Data
Existing 115 kV Sub-Transmission Line (SCE, 2008)
115 kV Buffer
Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo Territory
Location Map
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\03_Task_Sensitive_Plants\LBV_Survey.mxd
Date: 8/19/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
100 50 0 100 Feet
AECOM
Figure 2 - 3
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Project Vicinity
Proposed and Alternative
115 kV Study Area


479600
479700
479800
479900
480000
480100
480200
480300
3722800
3722700
3722600
3722500
3722400
3722300
3722200
SWS7-1
DEBON
CENTURION
CARDINAL
WRIGHT
ROLLRUS
NIKKI
Legend
Project Data
Existing 115 kV Sub-Transmission Line (SCE, 2008)
115 kV Buffer
Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo Territory
Location Map
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\03_Task_Sensitive_Plants\LBV_Survey.mxd
Date: 8/19/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
100 50 0 100 Feet
AECOM
Figure 2 - 4
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Project Vicinity
Proposed and Alternative
115 kV Study Area


480600
480700
480800
480900
481000
481100
481200
3724000
3723900
3723800
3723700
3723600
3723500
3723400
SWS10-1
Legend
Project Data
Existing 115 kV Sub-Transmission Line (SCE, 2008)
115 kV Buffer
Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo Territory
Location Map
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\03_Task_Sensitive_Plants\LBV_Survey.mxd
Date: 8/19/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
100 50 0 100 Feet
AECOM
Figure 2 - 5
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Project Vicinity
Proposed and Alternative
115 kV Study Area


479800
479900
480000
480100
480200
480300
480400
480500
3724600
3724500
3724400
3724300
3724200
3724100
SWS11-1
BLUE JAY
ROLLING HILLS
GARBAW
CLEVELAND
Legend
Project Data
Existing 115 kV Sub-Transmission Line (SCE, 2008)
115 kV Buffer
Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo Territory
Location Map
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\03_Task_Sensitive_Plants\LBV_Survey.mxd
Date: 8/19/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
100 50 0 100 Feet
AECOM
Figure 2 - 6
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Project Vicinity
Proposed and Alternative
115 kV Study Area


480000
480100
480200
480300
480400
480500
480600
480700
3725900
3725800
3725700
3725600
3725500
3725400
CWR4-1
Legend
Project Data
Existing 115 kV Sub-Transmission Line (SCE, 2008)
115 kV Buffer
Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Least Bell's Vireo Territory
Location Map
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\03_Task_Sensitive_Plants\LBV_Survey.mxd
Date: 8/19/2010
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
100 50 0 100 Feet
AECOM
Figure 2 - 7
Least Bell's Vireo & Southwestern Willow Flycatcher Survey Area
Project Vicinity
Proposed and Alternative
115 kV Study Area

2.3 Description of Survey Sites

The **CWR2-1** survey site contains relatively mature willow and cottonwood riparian woodland, which occurs in somewhat narrow stands bordering the San Jacinto River (SJR), immediately upstream of Casino Road (Figure 2-1). This habitat also continues upstream from CWR2-1, extending to Interstate 15, approximately 450 feet northeast of CWR2-1. The SJR along this stretch carried running water through most of the survey period (i.e., approximately April to June). During July, only one fairly deep pool remained that held some surface water until the end of the survey (July 26, 2010). CWR2-1 and the area immediately upstream have the largest amount of well-developed riparian woodland habitat of the sites included in this survey.

The **TS1-1** survey site is immediately downstream of CWR2-1, separated only by the Casino Road bridge (Figure 2-1). The vegetation within TS1-1, which lines a broader and more open section of SJR, appears as a significantly more disturbed riparian community. Although it still supports a few mature willow trees, it is dominated by nonnative vegetation, including salt cedar and giant reed. The upper banks of this survey site are also dominated by ruderal vegetation [e.g., mustard (*Brassica* sp.), tocalote (*Centaurea melitensis*), and castor bean (*Ricinus communis*)].

SWS1-1 is a very small survey site consisting primarily of a few young willow trees growing in an otherwise open field (Figure 2-2). Approximately 150 feet west of the SWS1-1 survey site, however, begins a fairly extensive riparian scrub habitat dominated by a mix of young to moderate aged willows and salt cedar. This riparian scrub habitat did not appear to be associated with any noticeable drainage, as the terrain throughout this area is relatively flat.

SWS4-1 supported a mix of trees, including a few mature coast live oaks and evergreen ash (*Fraxinus uhdei*) (Figure 2-3). This survey site was quite dry, had a minimal understory, and merged into a chaparral plant community to the west. SWS4-1 showed noticeable evidence of human disturbance with Beverly Road and multiple residential units immediately to the north and a dirt road to the east.

Survey sites **SWS2-1**, **SWS3-1,** and **SWS5-1** are relatively small and close together (Figure 2-3). In general, they supported a broad mix of trees, including several mature willows (especially within the SWS5-1 site), coast live oak, and eucalyptus trees (*Eucalyptus* sp.). All sites lacked a significant understory component and were fairly heavily disturbed by significant human activity. Sites SWS3-1 and SWS5-1 lie immediately adjacent to a busy Bundy Canyon Road, and residences border the SWS5-1 site to the east and west. A fenced storage area and illegal dumping were noted adjacent to the SWS2-1 and SWS3-1 sites.

The **SWS7-1** survey site consists of a broken and very narrow string of young willows that is bisected by Waldon Road (Figure 2-4). Immediately to the north are rural residential properties. The habitat quality of this site was considered poor due to the degree of human disturbance and the overall sparseness of vegetation.

SWS10-1 follows a small drainage through an agricultural field (Figure 2-5). The drainage is bordered narrowly with young willows and mule fat. Although nearly 600 feet in length, a very busy Murrieta Road parallels this survey site as close as 40 feet to the west. The willow scrub habitat is very narrow and is disturbed by active farming practices. The habitat quality of this survey site was considered poor.

The **SWS11-1** survey site is primarily in a front yard of a rural residential property and lies immediately east of Byers Road (Figure 2-6). It consists of a very narrow strip of young willows which have a minimal understory and are quite sparse. The habitat quality of this site was considered poor due to the sparseness and small extent of vegetation and degree of human disturbance at this location.

CWR4-1 is located on a small drainage that runs through several rural residential properties (Figure 2-7). The survey site consisted of several mature willows and cottonwoods as well as a mix of nonnative trees and shrubs. Due to private property issues, the only access to the site was by way of Holland Road, which runs east-west through the middle of CWR4-1. As several horses were kept on the property to the north of Holland Road and had access to the riparian habitat, the understory habitat was noticeably disturbed. South of Holland Road, due to denseness of the tree canopy and possible thinning by the property owner, the understory vegetation was fairly minimal and disturbed in appearance.

2.4 Special Interest Avian Species

Three special interest bird species were identified during the course of this focused LBV/SWF survey. These included yellow warbler (*Dendroica petechia*), Cooper's hawk (*Accipiter cooperii*), and California horned lark (*Eremophila alpestris actia*). CDFG recognizes nesting yellow warblers as a California SSC. SSC species are those which have not been afforded protection under either the state or federal endangered species act but for which there is conservation concern due to declining populations, limited ranges, and/or continuing threats to their existence. Cooper's hawk and California horned lark were formerly considered SSC species; but during recent revisions to the SSC list published in 2008 (Shuford and Gardali 2008), these two species were removed from the list and are now considered only "Taxa to Watch."

Yellow warbler territory was consistently present through most of the survey period just upstream of CWR2-1. This territory overlapped the LBV territory at this location (as described above) and was therefore on average about 15 feet to 300 feet upstream of CWR2-1. A singing male was detected here on all visits between April 26 and July 1, and breeding was confirmed on June 16 and 25 when a family group was detected. A Cooper's hawk was seen flying over on May 24, 2010, between 750 feet to 1,000 feet northwest of CWR4-1. Raptor nests were not detected in or immediately adjacent to the CWR4-1 survey site. A singing California horned lark was heard along Byers Road, roughly 1,200 feet northeast of SWS11-1. No suitable breeding habitat for this species was present in or adjacent to the SWS11-1 survey site.

3.0 Conclusion

No breeding territories of either LBV or SWF were detected in the Project's survey sites during this focused survey conducted by AECOM. Single LBV territories were found within fairly close proximity to two of the survey sites (CWR2-1 and SWS1-1). One of these territories likely involved an unpaired male, although it was unclear if the other territory involved a lone male or a potential pair. Only four of the survey sites (i.e., CWR2-1, CWR4-1, SWS1-1, and TS1-1) appeared to have a moderate potential to be breeding habitat for LBV. The remaining survey sites were considered to have only marginally suitable habitat for LBV. Only one survey site (CWR2-1) was considered to have moderate potential as SWF breeding habitat, while the remainder was considered to be unsuitable for this species.

In addition to LBV, three other special interest birds were recorded during this focused survey: yellow warbler, Cooper's hawk, and California horned lark. All of these species were present in the vicinity of, but not within, the LBV/SWF survey area for this Project.

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Appendix A
Species List

The following is a list of all bird species recorded during the focused least Bell's vireo and southwestern willow flycatcher surveys conducted April 26 to July 26, 2010, for the Alberhill System Project.

Scientific Name	**Common Name**
Accipiter cooperii	Cooper's hawk
Aeronautes saxatalis	white-throated swift
Agelaius phoeniceus	red-winged blackbird
Anas platyrhynchos	mallard
Aphelocoma californica	western scrub-jay
Archilochus alexandri	black-chinned hummingbird
Ardea alba	great egret
Ardea herodias	great blue heron
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Callipepla californica	California quail
Calypte anna	Anna's hummingbird
Carpodacus mexicanus	house finch
Cathartes aura	turkey vulture
Catharus ustulatus	Swainson's thrush
Chondestes grammacus	lark sparrow
Colaptes auratus	northern flicker
Columba livia	rock pigeon
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Dendroica petechia	yellow warbler
Egretta thula	snowy egret
Eremophila alpestris	horned lark
Euphagus cyanocephalus	Brewer's blackbird
Falco sparverius	American kestrel
Geococcyx californianus	greater roadrunner
Geothlypis trichas	common yellowthroat
Guiraca caerulea	blue grosbeak
Icterus bullocki	Bullock's oriole
Icterus cuculattus	hooded oriole
Larus californicus	California gull
Melospiza melodia	song sparrow
Melozone crissalis	California towhee
Mimus polyglottos	northern mockingbird
Molothrus ater	brown-headed cowbird
Myiarchus cinerascens	ash-throated flycatcher
Nycticorax nycticorax	black-crowned night-heron
Passerina amoena	lazuli bunting
Petrochelidon pyrrhonota	cliff swallow
Phainopepla nitens	phainopepla
Pheucticus melanocephalus	black-headed grosbeak
Picoides nuttallii	Nuttall's woodpecker
Pipilo maculatus	spotted towhee
Piranga ludoviciana	western tanager
Psaltriparus minimus	bushtit
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe

Scientific Name	Common Name
Spinus lawrencei	Lawrence's goldfinch
Spinus psaltria	lesser goldfinch
Spinus tristis	American goldfinch
Stelgidopteryx serripennis	northern rough-winged swallow
Streptopelia decaocto	Eurasian collared dove
Sturnus vulgaris	European starling
Thryomanes bewickii	Bewick's wren
Toxostoma redivivum	California thrasher
Tyrannus verticalis	western kingbird
Tyrannus vociferans	Cassin's kingbird
Vireo pusillus	Bell's vireo
Wilsonia pusilla	Wilson's warbler
Zenaida macroura	mourning dove

Appendix B
Photographs



Photo 1. April 26, 2010. Proposed Alberhill Substation. Just upstream of CWR2-1.



Photo 2. April 26, 2010. CWR2-1.



Photo 3. July 26, 2010. CWR2-1. Just upstream of the San Jacinto River.



Photo 4. April 26, 2010. SWS1-1. Looking northwest from the proposed Alberhill Substation.



Photo 5. April 26, 2010. TS1-1.

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SJM BIOLOGICAL CONSULTANTS

5 July 2010

Matthew Mallé
AECOM
1461 E. Cooley Dr.
Suite 100
Colton CA, 92324
909.554.5041

Dear Matthew:

Following is a letter-report of the results of a habitat assessment for the Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*) (LAPM) in a 400-foot-wide corridor (study area) along the proposed alignment for the Southern California Edison 115 kV sub-transmission line (sub T/L) in Western Riverside County (Figure 1).

BACKGROUND AND SITE DESCRIPTION

The LAPM is a California Department of Fish and Game Species of Special Concern (CSC), but is not listed as endangered or threatened by the CDFG or U.S. Fish and Wildlife Service. Based on the information provided with their list of "Special Animals," the Department of Fish and Game has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction (CDFG 2009). The goal of this designation is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their continued existence.

The LAPM is a covered species by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and is on the MSHCP *Additional Survey Needs and Procedures* list. Surveys for the LAPM are required to be conducted as part of the project review process for projects occurring within the MSHCP designated Mammal Species Survey Area where suitable habitat is present (Dudek and Associates 2003). Although the current project alignment and survey corridor occur outside the designated MSHCP Mammal Species Survey Area, the results of the Biological Resources Technical Report (BTR) produced for the Proposed Alberhill System Project concluded that LAPM had a moderate potential to occur within the project alignment (AECOM, 2009). LAPM potential for occurrence within the BTR is based on the species' preferred habitat and the vegetation communities mapped within the project alignment area. This

pocket mouse is a high priority species for the MSHCP, and developers of project sites found to harbor this animal must provide mitigation lands to offset disturbances to occupied habitats.

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). Examples of noteworthy LAPM populations that have been confirmed in recent years include the following: (a) Lake Perris State Recreation Area (e.g., Montgomery 2003); (b) the outflow point of Massacre Canyon, along the northern edge of the San Jacinto River floodplain (Montgomery 1994a); (c) farther east in the San Jacinto River floodplain at the Gilman Springs Bridge and beyond (Montgomery 2002; Montgomery 2010b); (d) to the south in the area of Skunk Hollow east of Murrieta Hot Springs (Montgomery 1994b); (e) Double Butte County Park to the east of Sun City (Montgomery and Davenport 2005); (f) Aguanga and Vail Lake areas (Dudek and Associates 2003); (g) San Gorgonio Wash area and San Timoteo Canyon (Dudek and Associates 2003; CNDDB records); (h) Santa Ana River Wash near Redlands (Montgomery 2009); and (i) in Fontana along an existing SCE power line (Montgomery 2010a). Populations are known from a number of other locations in the 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.

Based on a review of the California Natural Diversity Data Base (CNDDB) (CDFG 2010), no previous records were reported for the current project alignment. LAPM occurrences closest to the current project area occur in the vicinity of Murrieta and Double Butte, 7.4 miles to the south and 5.5 miles to the east, respectively.

The preferred habitat of 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; Montgomery 1994a, b, and 2002). Nonetheless, LAPM also have been captured a considerable distance from distinctly sandy soil habitats, such as at the San Jacinto Wildlife Area and at March Air Force Base (Montgomery pers. observ.). The primary vegetation communities in which LAPM have been found include disturbed (non-native) annual grassland, Riversidean sage scrub, and Riversidean alluvial fan sage scrub; however, chamise and red shank chaparral associations also are used by this pocket mouse. Volume II-B of the Riverside County MSHCP contains a thorough treatment of habitat requirements and related information for the LAPM (Dudek and Associates 2003).

The project alignment primarily follows existing roads in Riverside County. Thus, habitat disturbance is extensive in most parts of the alignment. Development of different types (cultivation, housing, industrial, roadways, graded and disked fields, etc.) occurs along most all sections of the alignment. Heaviest development occurs in the western and eastern sections, with lower density development occurring in the middle sections. Topography along the alignment ranges from level to steeply sloping. Soils also vary considerably but are typically loams in most locations; and sandy soils were very rare in the project area. Vegetation cover ranges from ruderal disturbed grassland to sage scrub and on rare occasion chaparral. The San Jacinto River crosses the alignment just west of I-15 near Lake Elsinore. LAPM are known to occur in

association with this river to the east of the project area; thus, this drainage was considered as potentially occupied by this pocket mouse.

METHODS

The study area was surveyed by vehicle and on foot on June 3 and 4, 2010. Heavily disturbed areas, including those with existing development, lawns or otherwise cultivated yards and fields, and recently graded level fields were considered unsuitable for and unoccupied by LAPM. Particular attention was paid to the potential for LAPM in relatively undisturbed grassland and sage scrub habitats and at locations with, or immediately adjacent to, low areas with sandy soils. Locations considered as potentially occupied by LAPM, even if the potential was low, were noted on field aerial maps.

The criteria used to define habitats with a potential for LAPM include the following:

- Occurs in association with the San Jacinto River flood plain
- Exhibits relatively undisturbed sage scrub or grassland habitat on level to gently sloping topography
- Occurs immediately adjacent to relatively undisturbed sage scrub or grassland habitat on level to gently sloping topography
- Exhibits loamy to sandy soils

Sites with heavy disturbance across most of the alignment width were classified as having very low potential for LAPM. Those with less disturbance were classified as having low potential for LAPM. Furthermore, those locations exhibiting larger patches of habitats such as those listed above (including those that were contiguous with similar lands outside of the alignment) were considered to exhibit higher potential for LAPM than smaller patches that were typically surrounded by development or disturbed lands.

RESULTS AND DISCUSSION

No areas with high or medium potential for the LAPM were found in the study area. 19 locations with degraded grassland and/or sage scrub habitats were determined to have low to very low potential for LAPM occurrence. These locations are shown in Appendix A and the general habitat conditions and potential for LAPM are shown in Table 1.

Large sections of the study area have been developed and are no longer suitable for LAPM. Other less-developed sections of the alignment occur in steep terrain that is entirely atypical of that used by LAPM and undoubtedly not occupied by this pocket mouse.

A final determination of LAPM presence/absence in the study area would require a trapping survey. The 19 low or very low potential locations listed in Table 1 and shown in Appendix A are the only locations that would require trapping confirmation. Presence/absence of LAPM can only be confirmed by trapping during the period between approximately March-October (this period varies with annual conditions), the period when the LAPM is typically active above

ground and available for capture in live-traps. During the remaining months of the year, LAPM is likely to be below ground and not available for capture.

RECOMMENDATIONS

Strategies

Direct impacts to LAPM would occur from construction related activities in occupied LAPM habitat. Impacts could be avoided or mitigated through one of the following four strategies.

- Avoid impacts to the 19 locations, thus presence/absence protocol surveys would not be required.
- Avoid impacts in occupied locations as determined by presence/absence protocol surveys in the 19 locations. Allow construction in unoccupied locations and avoid construction in occupied locations at each of the 19 locations.
- Determine occupied locations by presence/absence protocol surveys in the 19 locations. Allow construction in both unoccupied and occupied locations. Mitigate for impacts by meeting MSHCP requirements. MSHCP requirements include replacement of impacted LAPM habitat through purchase or dedication of LAPM habitat at a location approved by the Riverside Conservation Agency.
- Assume the 19 locations are all occupied. Mitigate for impacts by meeting MSHCP requirements.

Recommended Measures

Additionally, the following measures are recommended, if confirmation presence/absence trapping is not conducted, or if trapping shows LAPM to be present at a particular location:

- A biological monitor familiar with LAPM habitat requirements and potential sign should be present during all construction and construction related activities. The monitor should coordinate with construction personnel.
- Flagging or silt fencing should be placed around areas where construction activities are not allowed.
- Construction activities should be restricted to the smallest footprint possible at occupied or untrapped locations.
- Nighttime construction should not occur at the 19 locations, as LAPM are active primarily at night.
- Night lighting should be directed away from identified potential LAPM habitat.
- If possible heavy equipment should not be used within 50 feet of occupied habitat to avoid impacts to underground burrows from ground vibration.

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Table 1. Habitat Conditions and Potential for Los Angeles Pocket Mice at 19 Sites along the Proposed SCE Powerline Corridor in Riverside County California, June 2010

POLYGON	GENERAL HABITAT CONDITIONS	POTENTIAL FOR LAPM	APPROXIMATE DISTANCE (FEET) FROM R.O.W. CENTERLINE TO NEAREST EDGE OF POLYGON
A	HEAVILY DISTURBED BUT IN/ADJACENT TO RIVER BOTTOM WITH SOME SAND	LOW POTENTIAL	100
B	HEAVILY DISTURBED BUT IN/ADJACENT TO RIVER BOTTOM WITH SOME SAND	LOW POTENTIAL	0
C	HEAVILY DISTURBED BUT IN/ADJACENT TO RIVER BOTTOM WITH SOME SAND	LOW POTENTIAL	0
D	HEAVILY DISTURBED BUT IN/ADJACENT TO RIVER BOTTOM WITH SOME SAND	LOW POTENTIAL	0
E	CULTIVATED FIELD NEXT TO SCRUB PATCHES	VERY LOW POTENTIAL	75
F	CULTIVATED FIELD AND SCRUB PATCH	VERY LOW POTENTIAL	100
G	CULTIVATED FIELDS NEXT TO SCRUB PATCHES	VERY LOW POTENTIAL	100
H	CULTIVATED FIELDS NEXT TO SCRUB PATCHES	LOW POTENTIAL	50
I	CULTIVATED FIELDS NEXT TO SCRUB PATCHES	VERY LOW POTENTIAL	50
J	DISTURBED FIELD NEXT TO SCRUB PATCHES	LOW POTENTIAL	0
K	DISTURBED FIELD NEXT TO SCRUB PATCHES	LOW POTENTIAL	50
L	DISTURBED FIELDS NEXT TO SCRUB PATCHES	LOW POTENTIAL	0
M	SCRUB PATCH	LOW POTENTIAL	75
N	DISTURBED, OLD CULTIVATED? FIELD NEXT TO SCRUB PATCHES	VERY LOW POTENTIAL	0
O	DISTURBED FIELDS NEXT TO SCRUB PATCHES	LOW POTENTIAL	0
P	DISTURBED FIELDS NEXT TO SCRUB PATCHES	LOW POTENTIAL	0
Q	DISTURBED FIELDS NEXT TO SCRUB PATCHES	LOW POTENTIAL	0
R	DISTURBED FIELDS NEXT TO SCRUB PATCHES	VERY LOW POTENTIAL	75
S	DISTURBED FIELDS NEXT TO SCRUB PATCHES	VERY LOW POTENTIAL	75

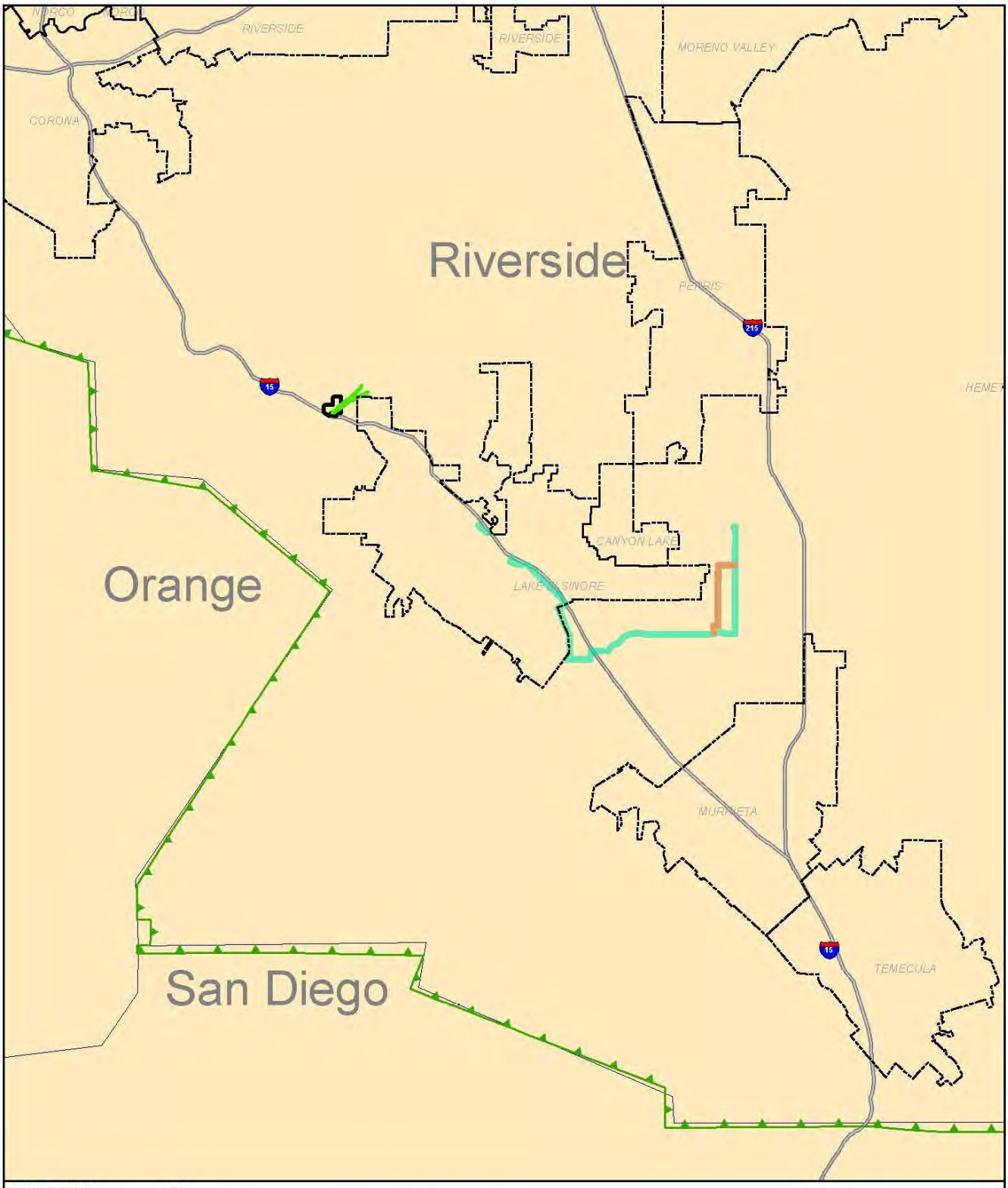


Figure 1

Regional Location
Alberhill System Project

APPENDIX A

AERIAL PHOTOGRAPHS SHOWING THE LOCATIONS OF 19 POLYGONS THAT EXHIBIT LOW TO VERY LOW POTENTIAL FOR LAPM



Legend

Project Data

115 kV Proposed Project

115 kV Survey Area

Proposed Single-Circuit
115 kV Subtransmission Line

115 kV Proposed Project Alternative

Alternative 115 kV Survey Area

LA Pocket Mouse Location

Areas requiring LAPM Trapping
to Establish Presence or Absence

Note: Study area buffers are 400 feet across,
200 feet on each side of the Transmission line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Path: C:\Projects\Alberhill 2010\ArcGIS\
Final\pocket mouse.mxd

Date: 3/22/2010
PROTECTED MATERIALS - Contains Critical
Energy Infrastructure Information.

100 50 0 100 Feet

AECOM

Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 1 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

115 kV Proposed Project
- 115 kV Survey Area
- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
- Alternative 115 kV Survey Area

LA Pocket Mouse Location
- Areas requiring LAPM Trapping to Establish Presence or Absence

Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line



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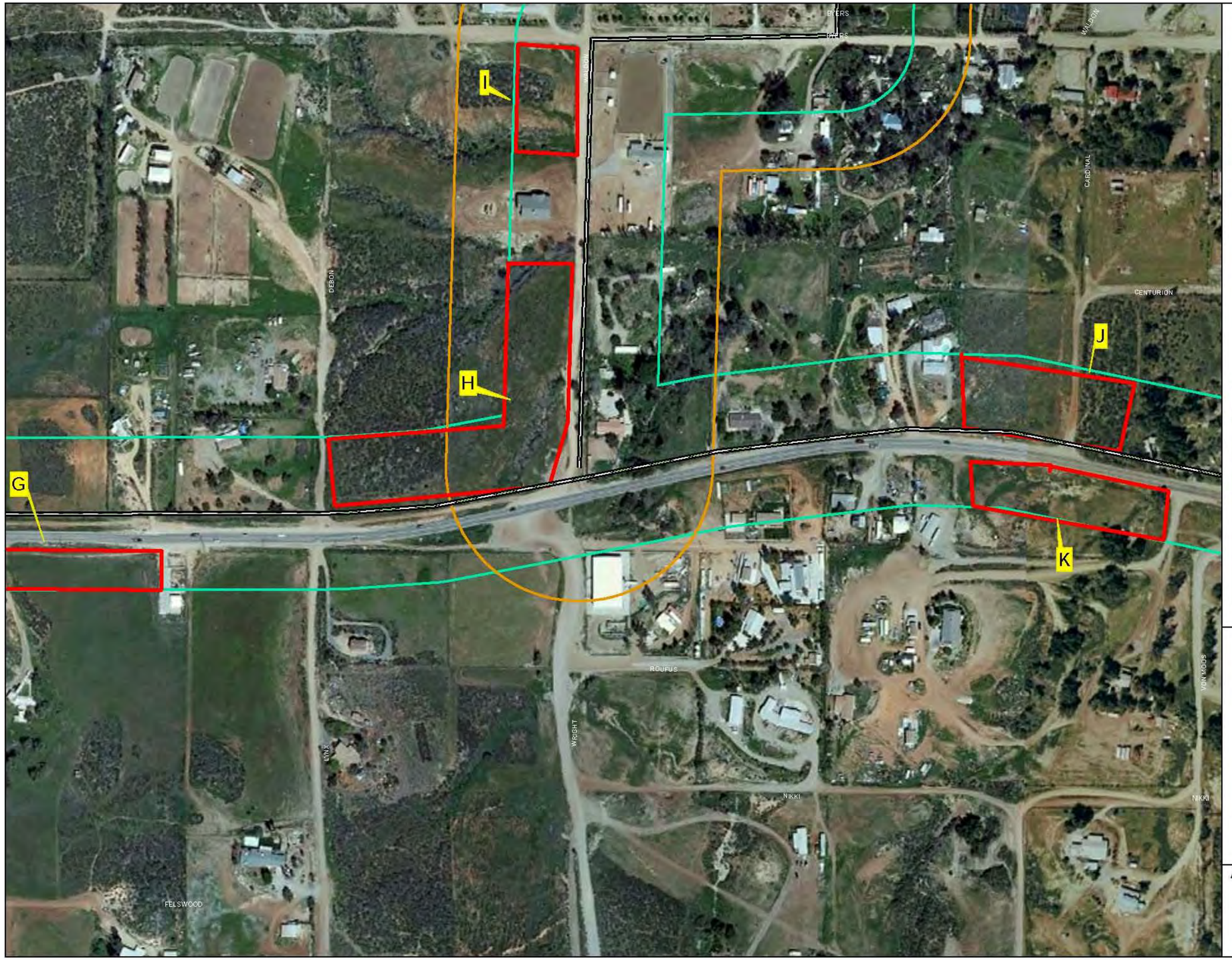
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AECOM

Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 2 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

115 kV Proposed Project
- 115 kV Survey Area
- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
- Alternative 115 kV Survey Area

LA Pocket Mouse Location
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Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line



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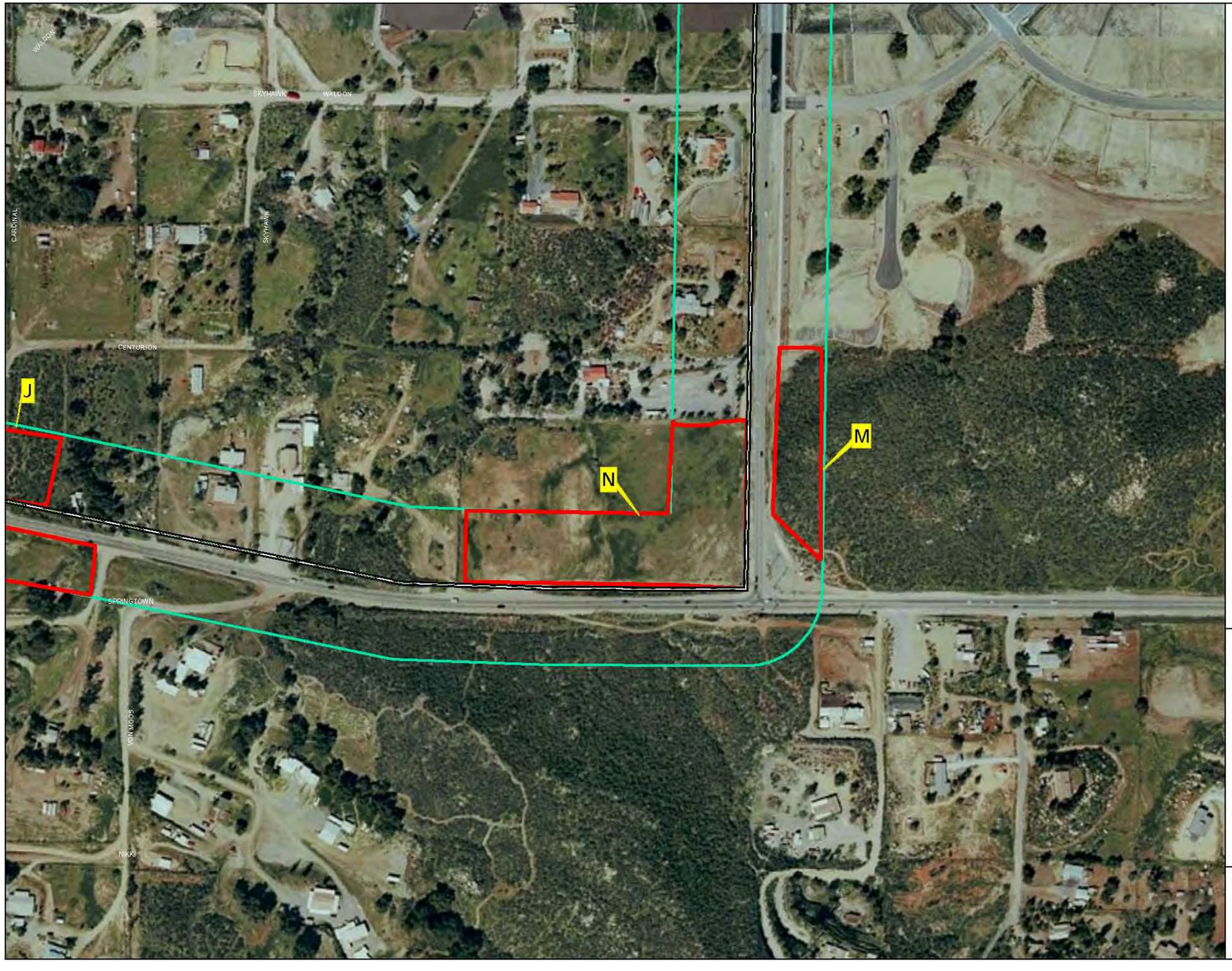
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Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 3 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

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- 115 kV Survey Area
- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
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LA Pocket Mouse Location
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Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line



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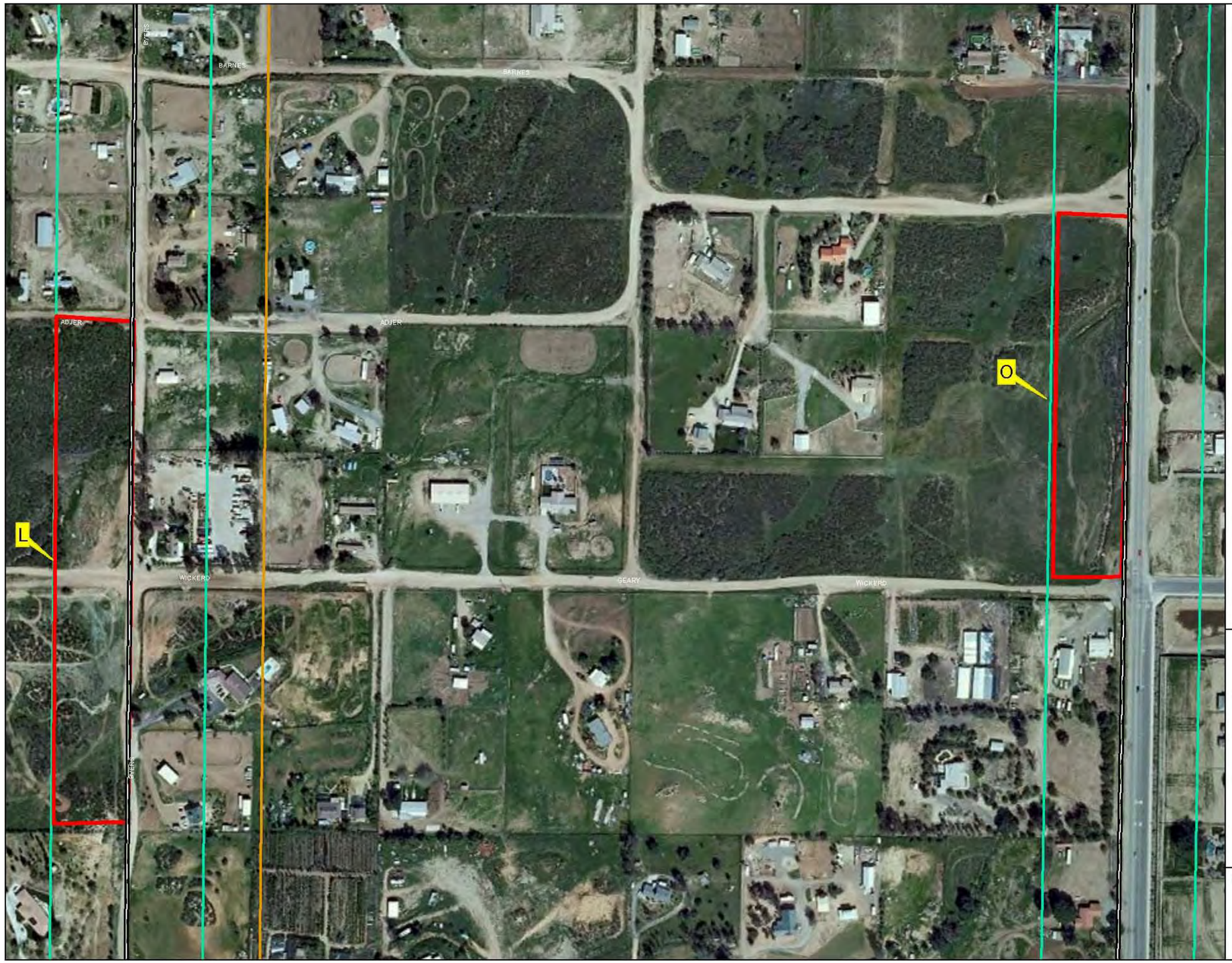
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AECOM

Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 4 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

115 kV Proposed Project
- 115 kV Survey Area
- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
- Alternative 115 kV Survey Area

LA Pocket Mouse Location
- Areas requiring LAPM Trapping to Establish Presence or Absence

Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line



MAP NOTES

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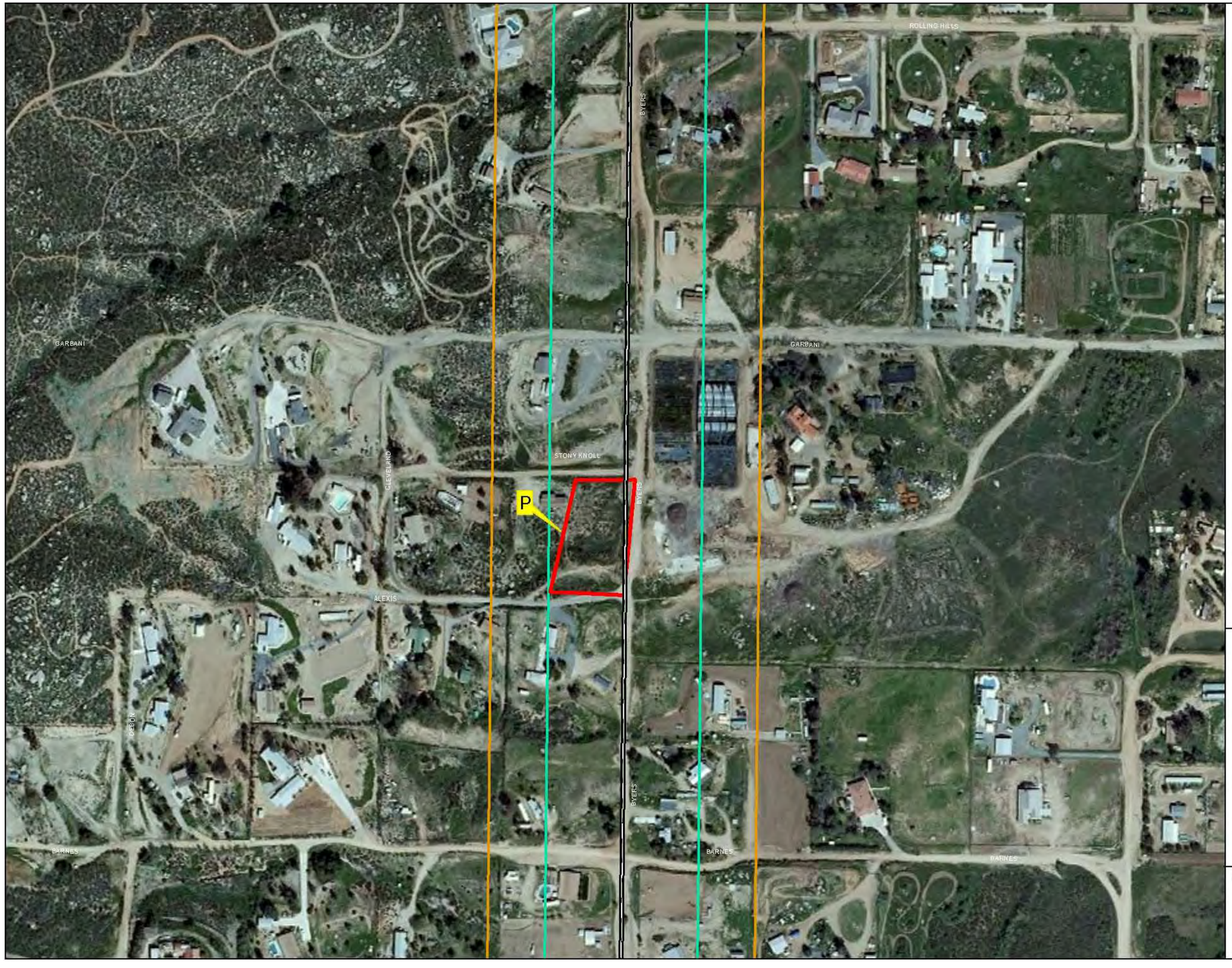
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AECOM

Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 5 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

115 kV Proposed Project
- 115 kV Survey Area
- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
- Alternative 115 kV Survey Area

LA Pocket Mouse Location
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Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 6 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

115 kV Proposed Project
- 115 kV Survey Area
- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
- Alternative 115 kV Survey Area

LA Pocket Mouse Location
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Note: Study area buffers are 400 feet across, 200 feet on each side of the Transmission line



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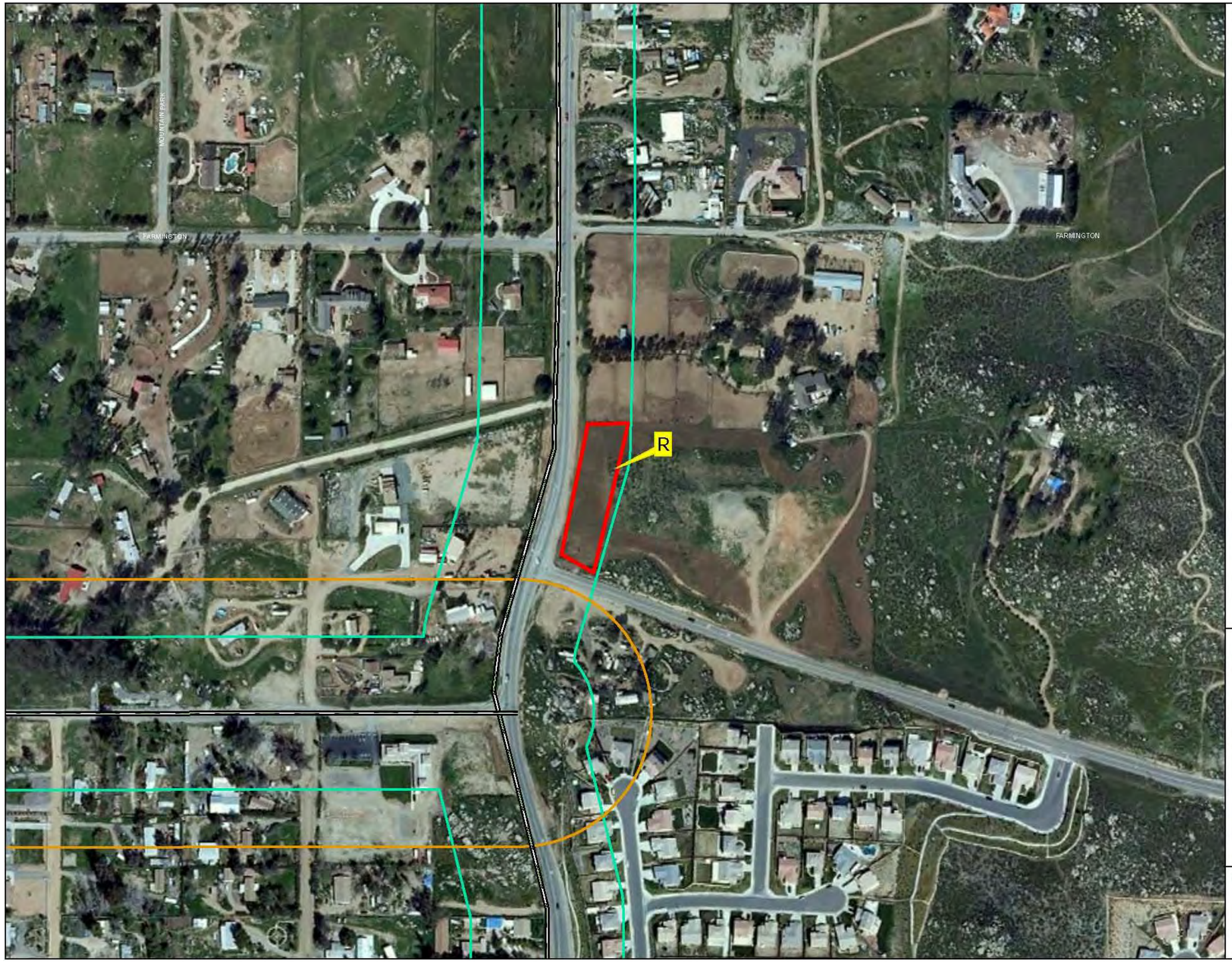
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Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 7 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

115 kV Proposed Project
115 kV Survey Area
Proposed Single-Circuit
115 kV Subtransmission Line

115 kV Proposed Project Alternative
Alternative 115 kV Survey Area

LA Pocket Mouse Location
Areas requiring LAPM Trapping
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PROTECTED MATERIALS - Contains Critical
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Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 8 of 9

Proposed and Alternative
115 kV Survey Area



Legend

Project Data

115 kV Proposed Project
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- Proposed Single-Circuit 115 kV Subtransmission Line

115 kV Proposed Project Alternative
- Alternative 115 kV Survey Area

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Potential Suitable
Los Angeles Pocket Mouse Habitat

Sheet 9 of 9

Proposed and Alternative
115 kV Survey Area

APPENDIX B

PHOTOGRAPHS OF EXAMPLES OF UNSUITABLE HABITAT, AND POTENTIALLY OCCUPIED LAPM HABITAT, AT SELECTED LOCATIONS IN THE 115KV ALIGNMENT

UNSUITABLE HABITAT FOR LAPM IN WESTERN AND CENTRAL PORTION OF ALIGNMENT









POTENTIALLY OCCUPIED LAPM HABITAT

POLYGON J



POLYGON C



F3
2011 Focused Species Survey Reports



Alberhill System Project
2011 Sensitive Plant Survey Report

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August 2011

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List of Acronyms

asl	above sea level
BTR	Biological Technical Report
CDFG	California Department of Fish and Game
cm	centimeter
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
dm	decimeter
ESA	Environmentally Sensitive Area
HRRP	Habitat Restoration and Revegetation Plan
kV	kiloVolt
mm	millimeter
MVA	Mega Volt Ampere
NEPSA	Narrow Endemic Plant Survey Area
RCA	Western Riverside Regional Conservation Authority
Sub	Subtransmission
T/L	transmission line
UCR	University of California, Riverside
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program
WMP	Weed Management Plan
WRCMSHCP	Western Riverside County Multiple Species Habitat Conservation Plan

1.0 Introduction

1.1 Purpose and Project Description

The purpose of this report is to document the results of the 2011 sensitive plant surveys conducted for the Alberhill System Project during the spring of 2011.

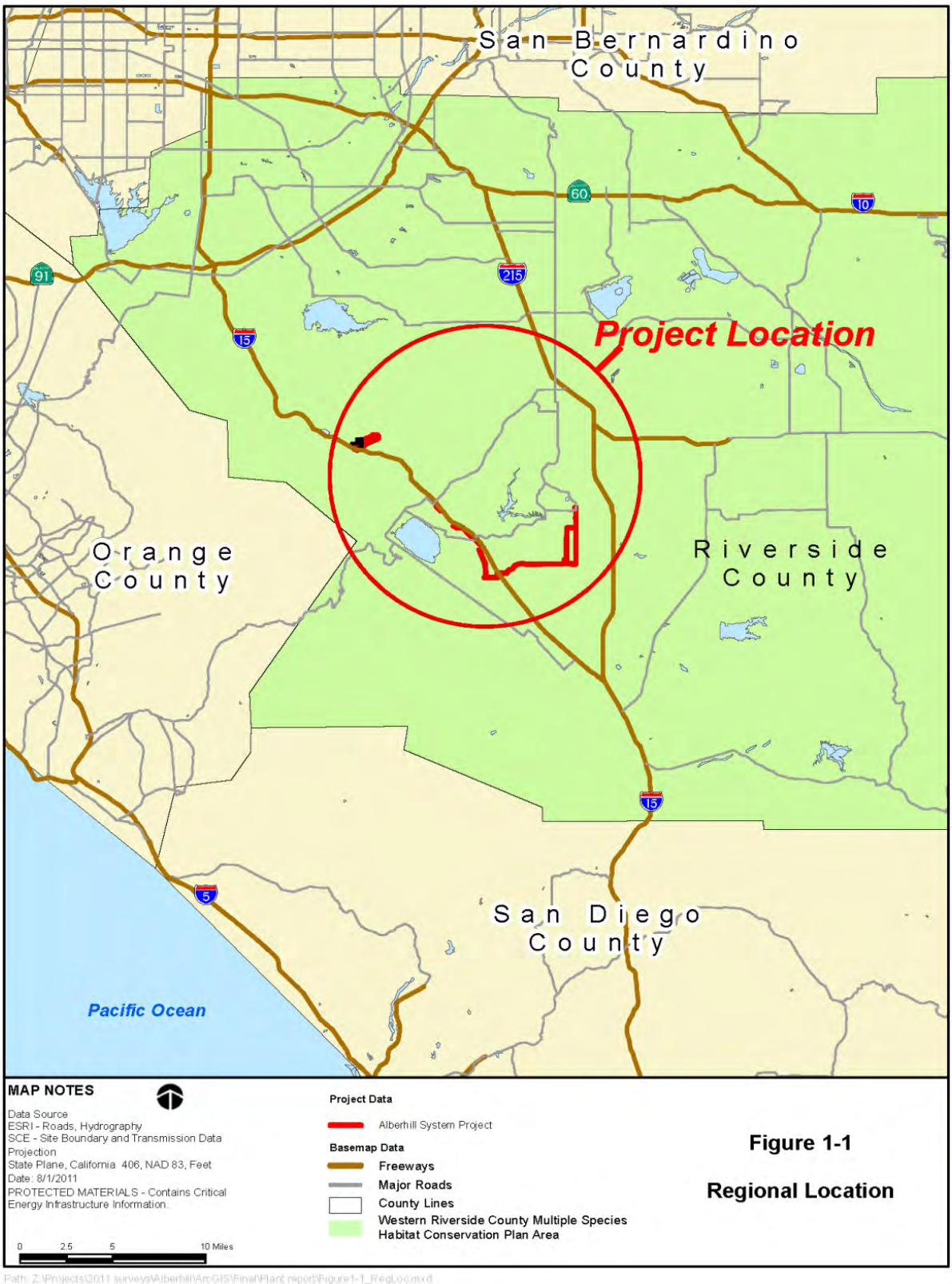
The purpose of the sensitive plant surveys was to determine presence/absence of federal, state, California Native Plant Society (CNPS), and Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP) sensitive plant species identified as having the potential to occur within or adjacent to the Project Area (target sensitive plant species). The Alberhill System Project is within the WRCMSHCP. The WRCMSHCP, administered by the Regional Conservation Authority (RCA), provides protection for covered species and requires surveys for Criteria and Narrow Endemic Plants in certain areas.

Southern California Edison Company (SCE) proposes to construct the Alberhill System Project (Project) to serve current and projected demand for electricity and maintain electric system reliability in southwestern Riverside County, including the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar as well as the surrounding unincorporated areas.

The Project Area is defined as the area analyzed for the following Project components: the proposed Alberhill Substation, the proposed 500-kiloVolt (kV) transmission lines (T/L), the alternative 500-kV T/L, the proposed 115-kV Subtransmission (Sub) T/L, and the alternative 115-kV Sub T/L (Figure 1-1).

- The proposed Alberhill Substation would be an unstaffed, automated 1,120 Mega Volt Ampere (MVA) 500/115-kV substation with an ultimate build-out of 1,680 MVA. Based on the preliminary design, approximately 8,000 cubic yards of soil, vegetation, and rock would be removed from the site (area of anticipated direct impact). In addition, approximately 10,320 cubic yards of soil would be removed as a result of excavation for foundation and building footings. Demolition of the existing horse ranch and relocation of a 30-inch gravity agricultural water line (owned and operated by Elsinore Valley Municipal Water District) would be required prior to mass grading. The horse ranch and adjacent undeveloped areas compose the Alberhill Substation survey area.

- The proposed 500-kV transmission lines (T/L) would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the 500-kV T/L include the following: the proposed N3 500-kV transmission line (N3 survey area [to the Alberhill Substation]), the proposed C1 500-kV transmission line (C1 survey area [from the Alberhill Substation]), and the existing Serrano-Valley 500-kV T/L (existing 500-kV T/L alignment). Collectively all three of these areas, as well as the proposed pull and tensioning locations, are referred to as the 500-kV T/L survey area. The 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the proposed and existing 500-kV T/L) around each of the 500-kV T/L project components.


San Bernardino County
Project Location
Orange County
Riverside County
San Diego County
Pacific Ocean
60
10
91
215
15
5
MAP NOTES
Data Source
ESRI - Roads, Hydrography
SCE - Site Boundary and Transmission Data
Projection
State Plane, California 406, NAD 83, Feet
Date: 8/1/2011
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 2.5 5 10 Miles
Project Data
Alberhill System Project
Basemap Data
Freeways
Major Roads
County Lines
Western Riverside County Multiple Species Habitat Conservation Plan Area
Figure 1-1
Regional Location
Path: Z:\Projects\2011 surveys\Alberhill\ArcGIS\Final\Plant report\Figure1-1_RegLoc.mxd

- The alternative 500-kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the alternative 500-kV T/L include the following: the alternative SA 500-kV transmission line (SA survey area [to the Alberhill Substation]) and the alternative VA 500-kV transmission line (VA survey area [from the Alberhill Substation]). Both of these survey areas, as well as the alternative pull and tensioning locations, are referred to as the alternative 500-kV T/L survey area. The alternative 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the alternative and existing 500-kV T/L) around each of the 500-kV T/L project components.

- The proposed 115-kV Sub T/L would consist of a new 115-kV Sub T/L and modification of the existing 115-kV Sub T/L. The 115-kV Sub T/L would transfer electrical service of five existing 115/12-kV substations (Ivyglen, Fogarty, Elsinore, Skylark, and Newcomb substations) to the new 500/115-kV Alberhill Substation. A Western Riverside County Narrow Endemic Plant Survey Area (NEPSA) identified along the 115-kV Sub T/L composes the kV Sub T/L survey area. The area analyzed for the 115-kV Sub T/L survey area encompasses a 400-foot wide corridor (200 feet on either side of the 115-kV Sub T/L) around the 115-kV Sub T/L project components.

- An alternative to the proposed 115-kV Sub T/L has also been analyzed (alternative 115-kV Sub T/L). This alternative consists of an optional routing of the eastern portion of the proposed 115-kV Sub T/L. Sensitive plant surveys were not conducted within the alternative 115-kV Sub T/L lines during the 2011 sensitive plant surveys.

AECOM was tasked with conducting sensitive plant surveys within the Alberhill Substation survey area, within the proposed 500-kV T/L and alternative 500-kV T/L (collectively referred to as the 500-kV study areas) survey areas, and within one NEPSA in the 115-kV Sub T/L study area.

Target sensitive plant species were identified as having a potential to occur within the Project Area based on a literature search. Two sensitive plant surveys were conducted during the spring of 2011. This report describes the 2011 survey methodology, discusses survey results and conclusions, and offers recommendations for impact avoidance and mitigation to sensitive plant species that were encountered during the 2011 sensitive plant species surveys.

1.2 Background

In November 2008, AECOM conducted a habitat assessment of the proposed Alberhill Substation site. Twenty sensitive plant species were determined to have a moderate potential for occurrence within and adjacent to the Alberhill Substation study area. As a result, the biological technical report (BTR, AECOM, 2009) recommended multiple sensitive plant surveys be conducted during the blooming periods of these species.

During spring of 2009, a sensitive plant survey was conducted by AECOM at the Alberhill Substation survey area. Two sensitive plant species, long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) and paniculate tarplant (*Dienandra* [*Hemizonia*] *paniculata*), were observed during the sensitive plant survey of the substation site.

In July 2009, AECOM conducted a habitat assessment within the 500-kV and 115-kV Sub T/L survey areas. Cumulatively, 61 sensitive plant species were determined to have a moderate to high potential for occurrence within and adjacent to the 500-kV T/L and 115-kV Sub T/L survey areas. The BTR

recommended multiple sensitive species surveys within the next available blooming period (AECOM 2009b).

During the spring of 2011, a sensitive plant survey was conducted by AECOM at the Alberhill Substation survey area, the proposed 500-kV T/L, and 115-kV Sub T/L survey areas. Five sensitive plant species, Parry's spineflower (*Chorizanthe parryi* var. *parryi*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), paniculate tarplant (*Dienandra* [*Hemizonia*] *paniculata*), Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*), and Coulter's matilija poppy (*Romneya coulteri*) were observed during the 2010 sensitive plant surveys.

Average rainfall in 2010 and expected average to above-average rainfall throughout the 2011 rainy season made 2011 an ideal year to conduct an additional year of surveys within the Project Area. In addition, SCE added the alternative 500-kV T/L survey areas to the 2011 sensitive plant survey scope.

1.3 Survey Locations

1.3.1 Alberhill Substation Survey Area

The Alberhill Substation survey area is approximately 125 acres and is located within the Temescal Valley, south of Corona, California (see Figure 1-2). The Project Area can be found on the Alberhill, CA 7.5-minute United States Geological Survey (USGS) topographic quadrangle (1980). The Alberhill Substation survey area is located within the northwest ¼ of Section 16, Township 5 South, Range 5 West, in the city of Lake Elsinore, California. The Alberhill Substation survey area elevation ranges from 1,200 to 1,620 feet above sea level (asl).

1.3.2 500-kV T/L Survey Areas

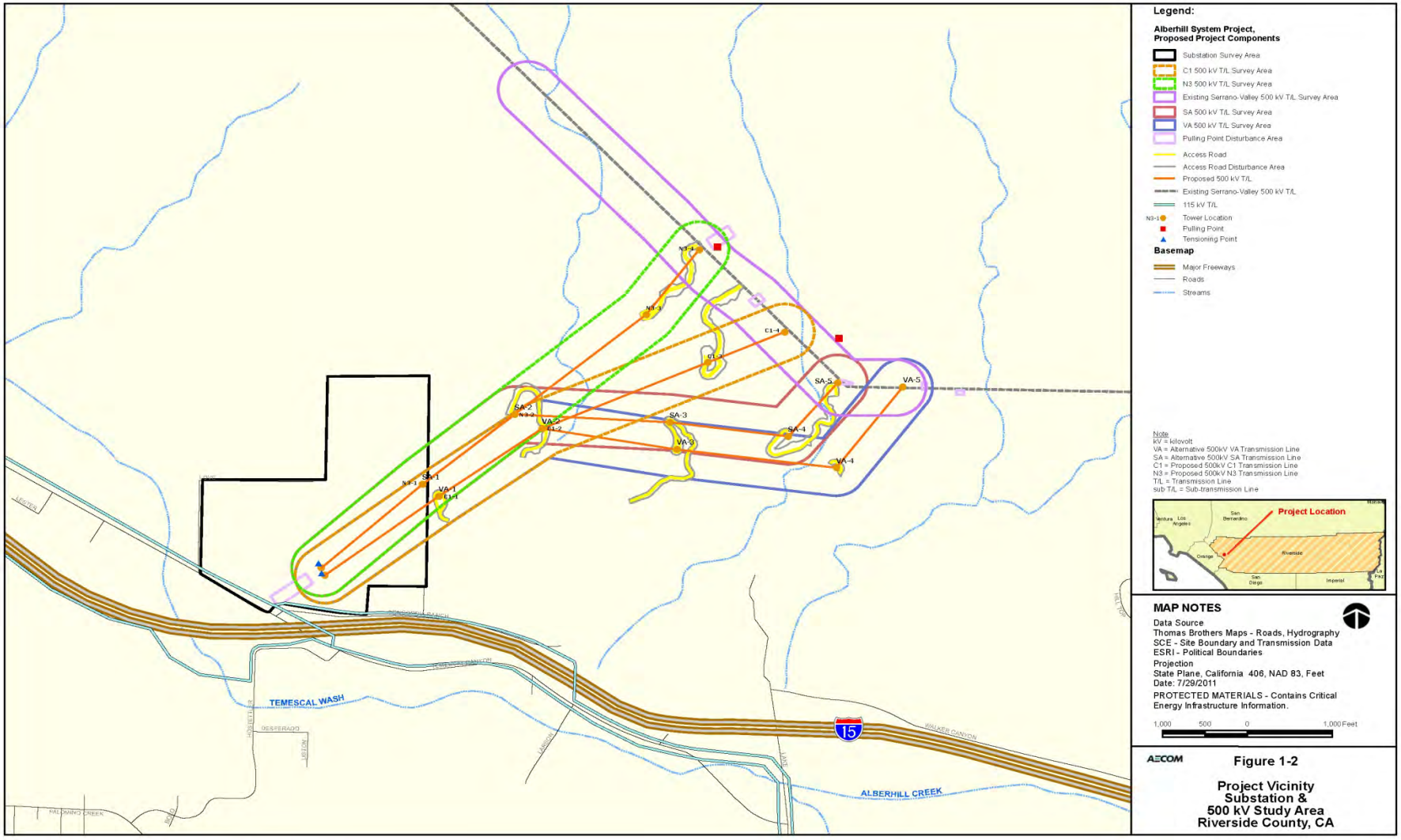
The northeast portions of the 500-kV study areas are located within the Gavilan Hills, which can be characterized as steep terrain. The southwest portion of the 500-kV study areas overlaps with the eastern portion of the Alberhill Substation survey area (Figure 1-2). The 500-kV T/L survey area elevation ranges from 1,200 to 1,861 feet asl.

Proposed 500-kV T/L Survey Area

The proposed 500-kV T/L survey area is approximately 319 acres and is located northeast of the proposed Alberhill Substation site. The 500-kV T/L survey area traverses unincorporated portions adjacent to the City of Lake Elsinore, California, within Riverside County and is located within the Lake Mathews and Alberhill CA 7.5-minute USGS topographic quadrangles. On the Alberhill USGS quadrangle, the corridor alternatives are located within the southeast quarter of Section 9, the southwest quarter of Section 10, the northwest quarter of Section 15, and the northern half of Section 16, all within Township 5 South, Range 5 West.

Alternative 500-kV T/L Survey Areas

The alternative 500-kV T/L survey area is approximately 260 acres and is located northeast of the proposed Alberhill Substation site. The alternative 500-kV T/L survey area traverses unincorporated portions of Riverside County adjacent to the City of Lake Elsinore, California, and is located within the Alberhill CA 7.5-minute USGS topographic quadrangles. On the Alberhill USGS quadrangle, the alternative 500-kV T/L study areas are located within the southern half of Section 10, the northern half of Section 15, and the northern half of Section 16, all within Township 5 South, Range 5 West.

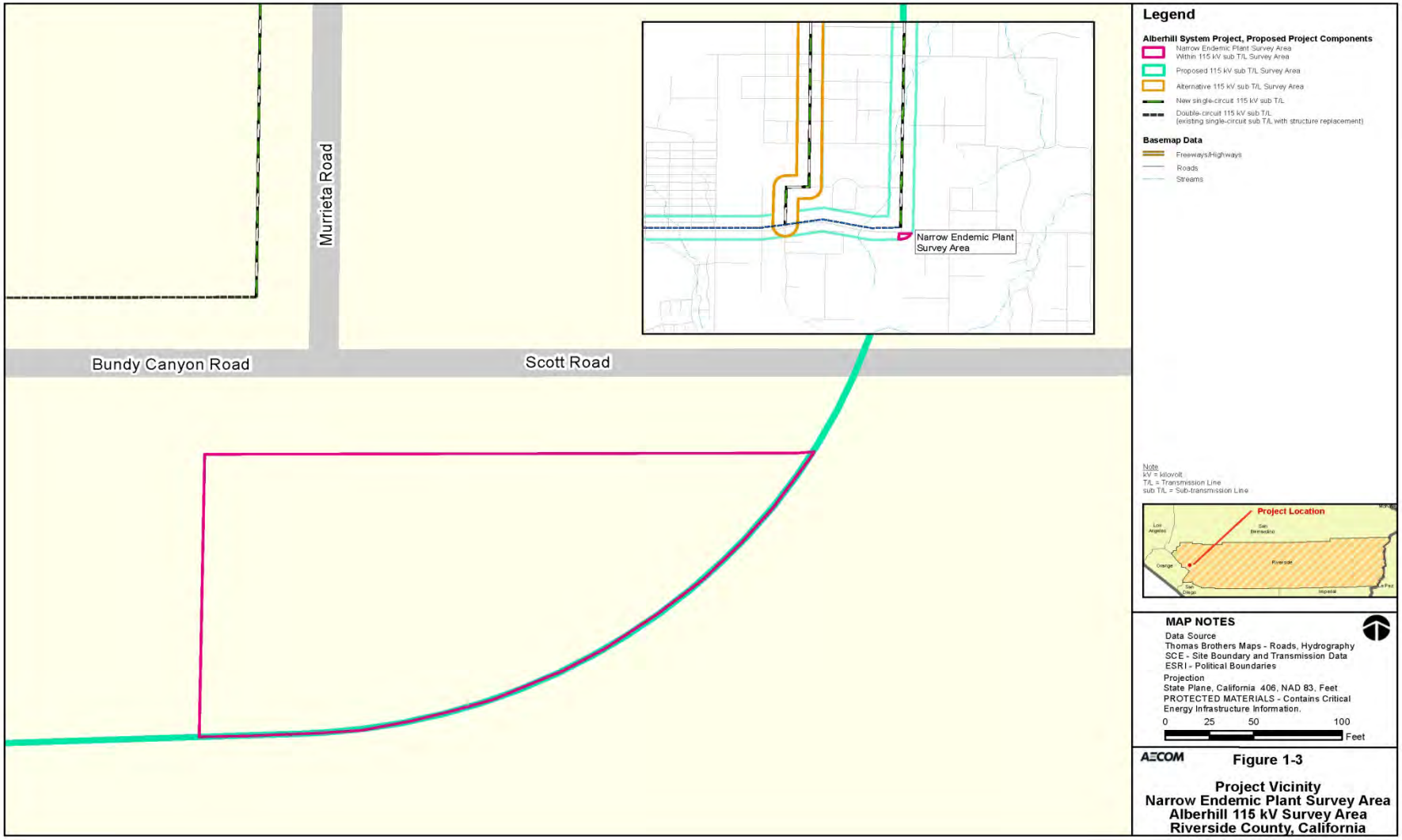


Path: Z:\Projects\2011 surveys\Alberhill\ArcGIS\Final\Plant report\Figure 1-2 sub 500 kV Study Area.mxd

1.3.3 115-kV Sub T/L Survey Area

The portion of the 115-kV alignment that has been designated as a NEPSA by the WRCMSHCP consists of approximately one acre (Note: The 115-kV Sub T/L survey area does not contain any WRCMSHCP Criteria Plant Species Survey Areas). The NEPSA within the 115-kV study area is located south of the intersection of Bundy Canyon Road and Murrieta Road. The 115-kV study is located on the Romoland CA 7.5-minute USGS topographic quadrangle. The 115-kV study area is located within the northwest ¼ of Section 21, Township 6 South, Range 3 West, in the City of Menifee, California.

The NEPSA within the 115-kV study area can be characterized as a gently inclined, north-facing slope, dominated by dense chamise chaparral. The elevation of the 115-kV Sub T/L survey area is approximately 1,700 feet asl. The 115-kV NEPSA is approximately 14 miles southeast of the proposed Alberhill Substation and 500-kV T/L survey areas (Figure 1-3).


Murrieta Road
Bundy Canyon Road
Scott Road
Narrow Endemic Plant Survey Area
Legend
Alberhill System Project, Proposed Project Components
Narrow Endemic Plant Survey Area Within 115 kV sub T/L Survey Area
Proposed 115 kV sub T/L Survey Area
Alternative 115 kV sub T/L Survey Area
New single-circuit 115 kV sub T/L
Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
Basemap Data
Freeways/Highways
Roads
Streams
Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 25 50 100
Feet
AECOM
Figure 1-3
Project Vicinity
Narrow Endemic Plant Survey Area
Alberhill 115 kV Survey Area
Riverside County, California

2.0 Methodology

Survey design and implementation were based on the following survey protocol guidance: *U.S. Fish and Wildlife Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species (*USFWS 2000*)*; *Protocols for Surveying and Evaluation Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009); and *California Native Plant Society Botanical Survey Guidelines* (CNPS 2001).

2.1 Literature and Database Research

A literature and database search of the California Natural Diversity Database (CNDDB) and CNPS *Inventory for Rare and Endangered Vascular Plants of California* was conducted in March 2011.

Narrow Endemic and Criteria Area Plant Species GIS data developed to support the WRCMSHCP was used to create figures depicting survey areas that occurred within the MSHCP sensitive plant survey areas (Figures 2-1 and 2-2).

The *Focused Rare Plant Surveys, April and May 2009, Proposed Alberhill Substation Site, Lake Elsinore, CA* (AECOM 2009) and the *Alberhill System Project, 2010 Sensitive Plant Survey Report* (AECOM 2010) were also reviewed.

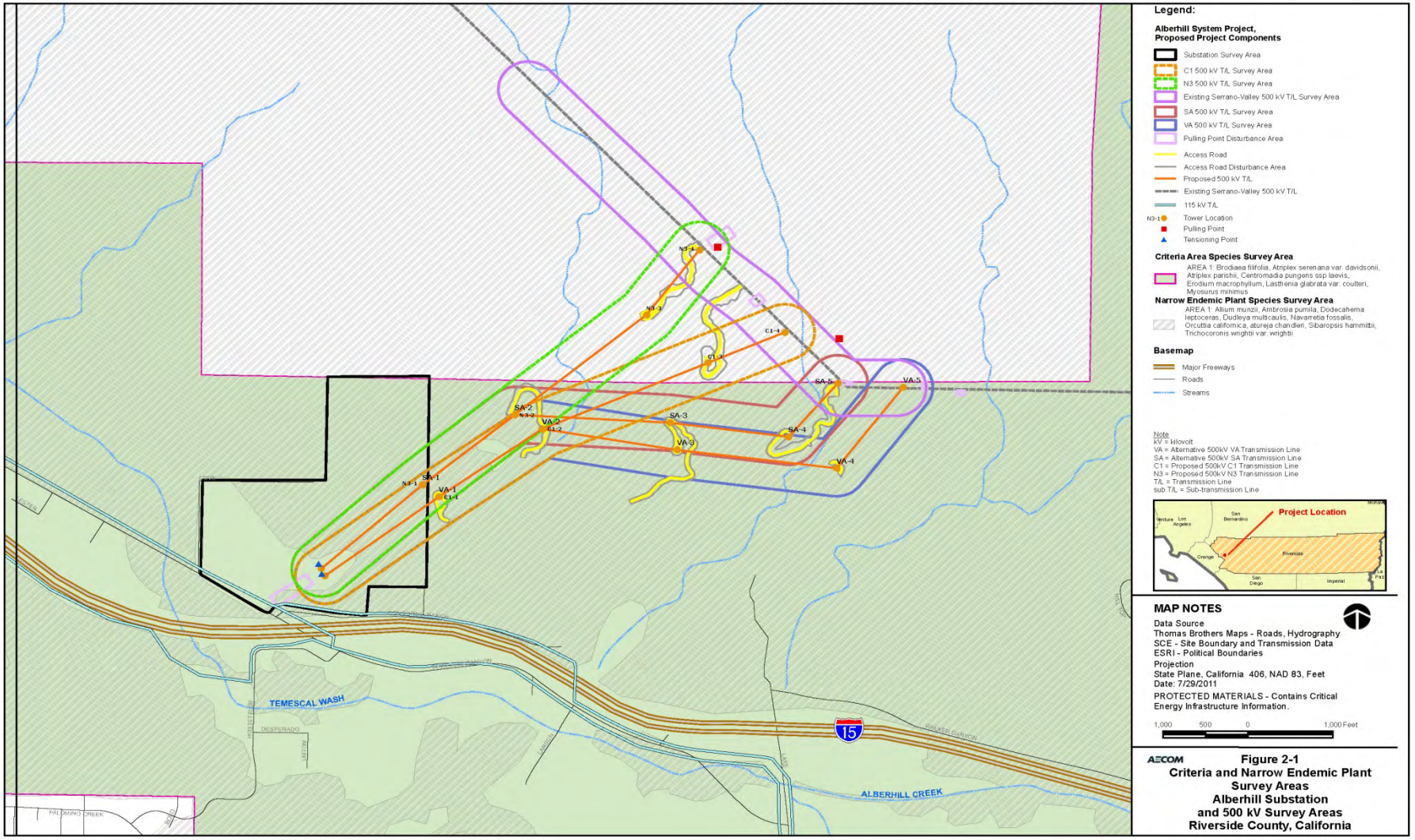
Results of the 2011 literature and database search identified 91 plant species based in the 9 USGS 7.5 Series Topographic quadrangles for the Project Area locations (center quadrangles: Alberhill, Lake Matthews, and Romoland; surrounding quadrangles: Santiago Peak, Corona South, Lake Elsinore, Steele Peak, Perris, Lakeview, Winchester, Bachelor Mtn., Wildomar, Sutton Peak, and Cañada Gobernadora). Additionally, all survey areas fall within the fee area for the WRCMSHCP; and a number of species, including those federal, state, CNPS, and WRCMSHCP (Narrow Endemic and Criteria Area plant species) listed, have the potential to occur on or adjacent to each of the survey areas.

The target sensitive plant species were divided into two groups (early spring and late spring), based on blooming periods for survey scheduling.

2.2 Voucher Specimen Review

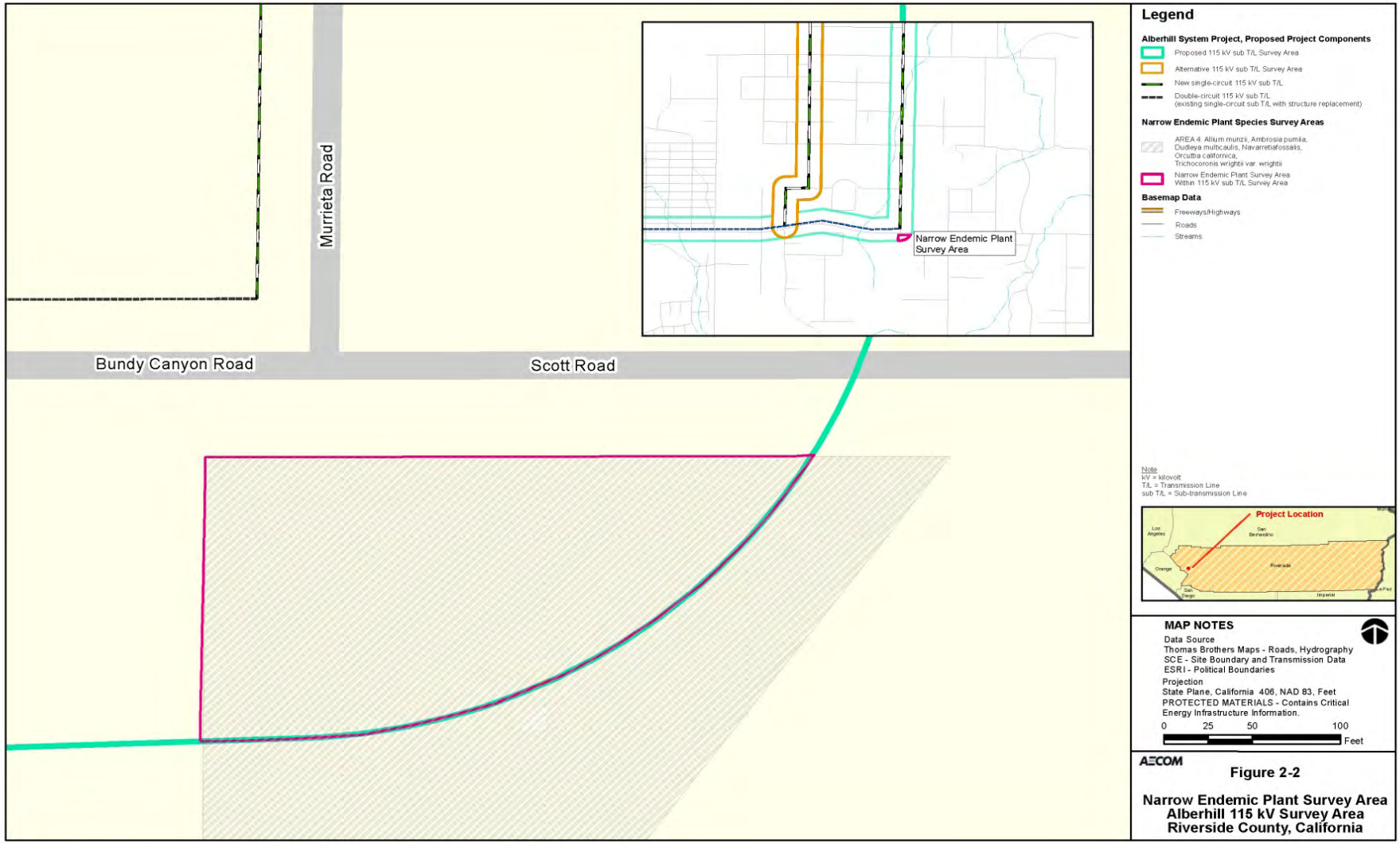
Prior to the field surveys, the AECOM biologists met University of California Riverside (UCR), Herbarium staff to study and become familiar with available target sensitive plant specimens.

As mentioned earlier, the BTRs prepared in 2009 for the Alberhill Substation site and 500- and 115-kV study areas identified a number of sensitive plant species that had potential to occur on or adjacent to each of the three survey areas. Potential occurrence in each of the BTRs was based on mapped vegetation communities and habitat preferences for each of the sensitive plant species. Both plant lists from each of the BTRs were combined to produce one list prior to the herbarium visit. This list was then supplemented with any sensitive plant species that were queried from the CNDDB and CNPS databases but not already on the list from the two BTRs. The final version of this list became the preliminary list of target sensitive plant species for the 2011 survey period.



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1


Murrieta Road
Bundy Canyon Road
Scott Road
Narrow Endemic Plant Survey Area
Legend
Alberhill System Project, Proposed Project Components
Proposed 115 kV sub T/L Survey Area
Alternative 115 kV sub T/L Survey Area
New single-circuit 115 kV sub T/L
Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
Narrow Endemic Plant Species Survey Areas
AREA 4: Allium munzii, Ambrosia pumila, Dudleya multicaulis, Navarretiafossalis, Orcuttia californica, Trichocoronis wrightii var. wrightii
Narrow Endemic Plant Survey Area Within 115 kV sub T/L Survey Area
Basemap Data
Freeways/Highways
Roads
Streams
Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 25 50 100
Feet
AECOM
Figure 2-2
Narrow Endemic Plant Survey Area
Alberhill 115 kV Survey Area
Riverside County, California

The preliminary sensitive plant species list was then refined during the herbarium visit by discussing known range and/or habitat preferences for each of the target sensitive plant species with Andy Sanders, curator of the UCR Herbarium and local endemic plant expert for western Riverside County, and Teresa Salvato, herbarium assistant and local endemic plant expert for western Riverside County. The final list of sensitive plant species became the guide for which voucher specimens were reviewed.

2.3 Reference Population Visit

The Consortium of California Herbaria (online database) was used to locate and map several reference sites prior to field surveys. Due to the number of target sensitive plant species that had the potential to occur, the reference site visits were limited to federal and state listed taxa and/or locations of reference population of sensitive plant species that occurred within the regional area surrounding the Project area. The reference sites were determined based on proximity to the Project area, number of species recorded at each location, and the date a voucher specimen was collected. The reference sites were visited one day prior to initiating both phases of field surveys. Data collected at each of the reference sites included target plant phenology, general habitat descriptions, and associated plant species observed growing in conjunction with the sensitive target plant species. Representative photographs of each target sensitive plant species observed were collected (Appendix A).

2.4 Survey Implementation

2.4.1 General Survey Methodology

Surveys consisted of comprehensive and systematic techniques following CDFG, USFWS, and CNPS protocols. Transects were spaced so that taxa could be identified between survey transects in each habitat.

Survey timing was defined by the target species blooming periods. Two survey periods were chosen for the 2011 sensitive plant surveys: early to mid spring (March-April) and mid to late spring (May-June).

Biologists conducting the survey carried the following equipment:

- Aerial maps which included reference markers of the survey area
- Trimble Juno SB units preloaded with Project Area data layers
- Field notebook for documenting species encountered and plant habitat characteristics
- Digital camera (Trimble Juno SB Unit) to document findings by photographing habitat conditions and flora of interest
- 10x hand lenses
- Plant press to collect unknown species and voucher specimens.

Information to complete a CDFG California Native Species Field Survey Form was collected for each sensitive plant population encountered during the survey.

General data recorded during sensitive plant surveys included:

- Date, time, and weather conditions of each survey
- GPS waypoints for observed sensitive plants or areas of ecological interest
- Habitat conditions
- All vascular plants observed onsite (native or naturalized)
- Any special status species observed and associated species
- A representative photograph of each sensitive plant species found and of vegetation community types encountered

Sensitive plant population size was estimated using one of two methods.

The first method was used for small, inconspicuous species (e.g., *Chorizanthe polygonoides* var. *longispina*). This method consisted of establishing a representative sample in a small area within the sensitive plant population, counting the number of sensitive plants within the sample area, and using the number within the sample area to extrapolate the size of the entire observed population.

The second method was used for larger, more conspicuous colonial species (e.g., *Romneya coulteri*). This method consisted of making a crude stem count.

Both methods were designed to estimate sensitive plant population size at a particular location to an order of magnitude.

In instances where safety concerns or inaccessibility prevented an area from being surveyed, 8x35-42 or greater power binoculars were used to scan the inaccessible areas for occurrence of target species.

Voucher specimens of common and sensitive plant species collected during the surveys were deposited at the UCR Herbarium.

2.4.2 Site Specific Survey Methodology

2.4.2.1 Alberhill Substation Survey Area

Surveys were focused in areas where direct impacts were anticipated. Native plant communities surrounding the impact areas were also surveyed. Transects within survey areas were adjusted to compensate for vegetation density and height. Areas containing dense populations of nonnative grasses were surveyed by meandering transects, where the focus was shifted to identifying small, open clay lenses. Some areas of rugged terrain within the northern portions of the Alberhill Substation survey area were inaccessible.

2.4.3 500-kV T/L Survey Area

Due to the extensive size and rugged terrain of the 500-kV alignments, sensitive plant surveys within the 500-kV T/L survey area were limited to areas of anticipated direct impact. Direct impact areas included known locations of proposed Project components, including: tower, pull, and tensioning locations. Each Project component location survey included a 200-foot survey buffer so that sensitive plant locations anticipated to be within direct impact areas were surveyed. Each of the 500-kV T/L Project component locations and an associated survey buffer were surveyed.

3.0 Existing Conditions

3.1 Soils

The WRCMSHCP has identified that sensitive plant species are associated with particular soil types. These soil types have been associated with Narrow Endemic and Criteria Area plant species' growth and survival and are considered a "sensitive" soil by the WRCMSHCP. These sensitive soil types include: Altamont clay, Altamont cobbly clay, Auld clay, Auld cobbly clay, Bosanko clay, Clay Pits, Domino silt loam, Porterville clay, Traver fine sandy loam, Traver loamy fine sand, and Willows silty clay (Riverside County 2004).

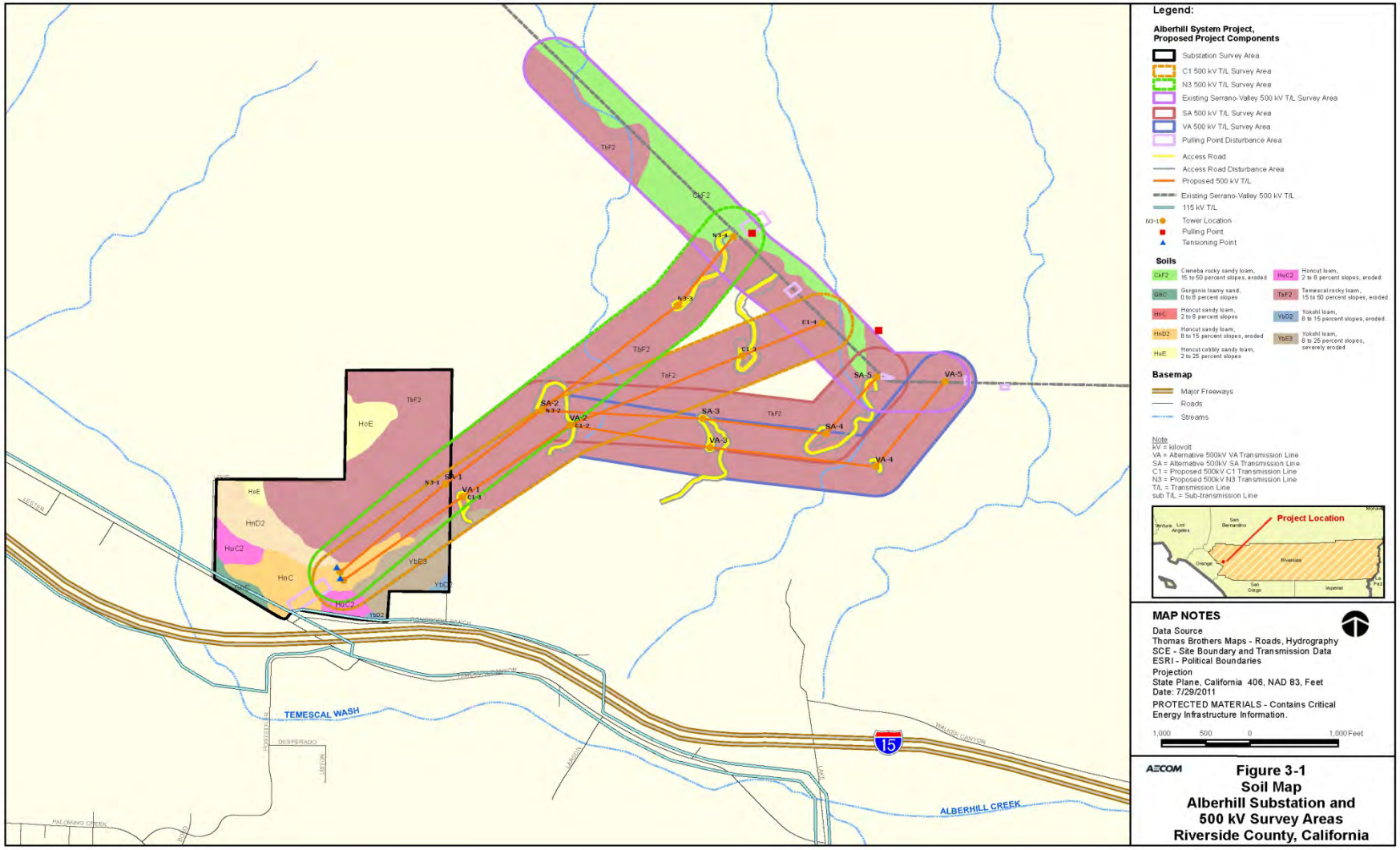
The U.S. Department of Agriculture (USDA) Websoil Survey was reviewed to identify the soil associations that occur within the Project site (USDA-NRCS 2010). No sensitive soil types were mapped within any of the survey areas. Soil associations within each of the survey areas are shown on Figures 3-1 and 3-2 and listed below.

3.1.1 Alberhill Substation Survey Area

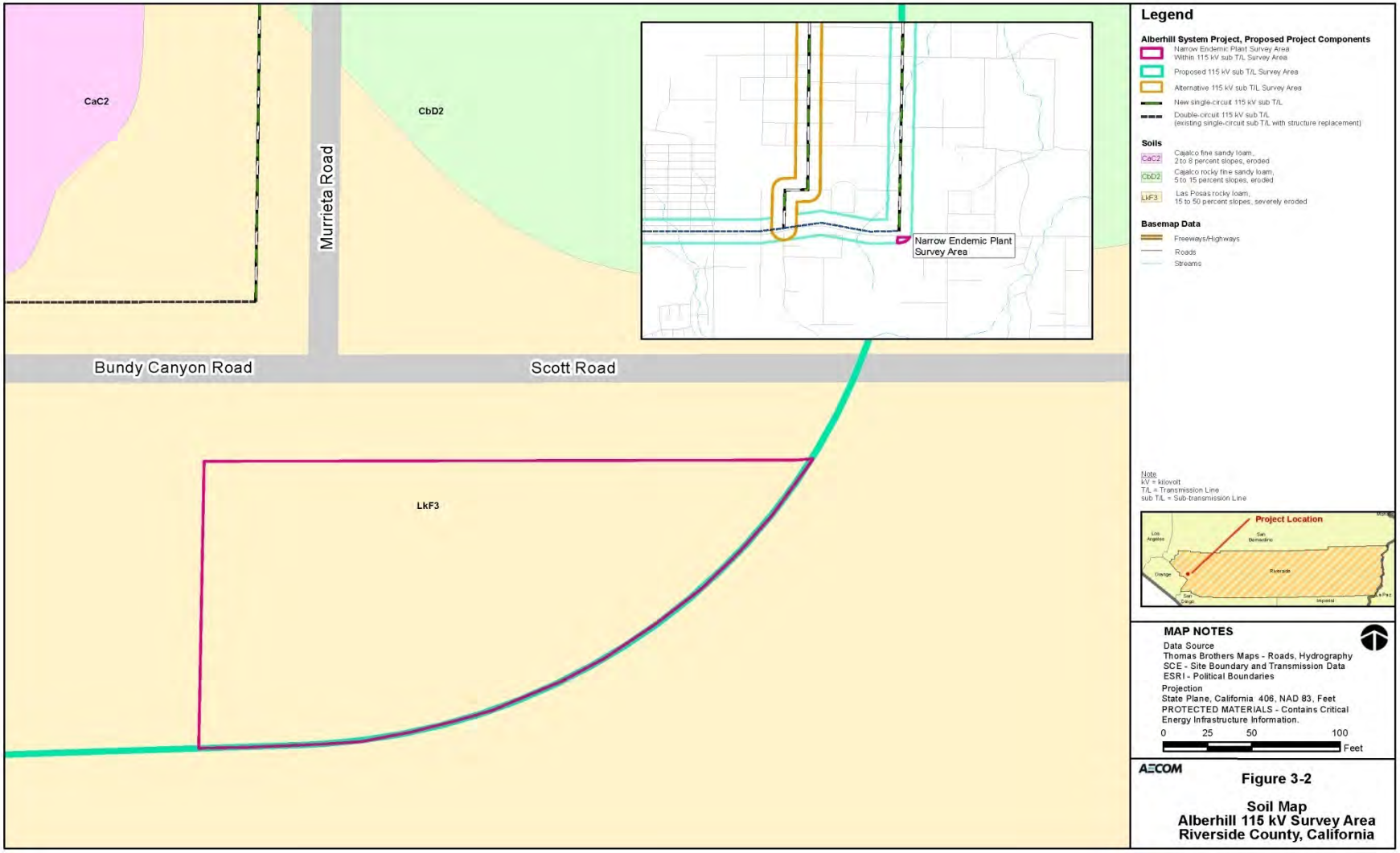
- Gorgonio loamy sand, 0 to 8 percent slopes
- Honcut sandy loam, 2 to 8 percent slopes
- Honcut sandy loam, 8 to 15 percent slopes, eroded
- Honcut cobbly sandy loam, 2 to 25 percent slopes
- Honcut loam, 2 to 8 percent slopes, eroded
- Temescal rocky loam, 15 to 50 percent slopes, eroded
- Yokohl loam, 8 to 15 percent slopes, eroded
- Yokohl loam, 8 to 25 percent slopes, severely eroded

3.1.2 500-kV T/L Survey Areas

- Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- Temescal rocky loam, 15 to 50 percent slopes, eroded
- Yokohl loam, 8 to 25 percent slopes, severely eroded
- Honcut loam, 2 to 8 percent slopes, eroded
- Honcut sandy loam, 2 to 8 percent slopes
- Honcut sandy loam, 8 to 15 percent slopes, eroded



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CaC2
CbD2
LkF3
Murrieta Road
Bundy Canyon Road
Scott Road
Narrow Endemic Plant Survey Area
Legend
Alberhill System Project, Proposed Project Components
Narrow Endemic Plant Survey Area Within 115 kV sub T/L Survey Area
Proposed 115 kV sub T/L Survey Area
Alternative 115 kV sub T/L Survey Area
New single-circuit 115 kV sub T/L
Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
Soils
CaC2 Cajalco fine sandy loam, 2 to 8 percent slopes, eroded
CbD2 Cajalco rocky fine sandy loam, 5 to 15 percent slopes, eroded
LkF3 Las Posas rocky loam, 15 to 50 percent slopes, severely eroded
Basemap Data
Freeways/Highways
Roads
Streams
Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 25 50 100
Feet
AECOM
Figure 3-2
Soil Map
Alberhill 115 kV Survey Area
Riverside County, California

3.1.3 115-kV Sub T/L Survey Area

- Las Posas rocky loam, 15 to 50 percent slopes, severely eroded

3.2 Vegetation Communities

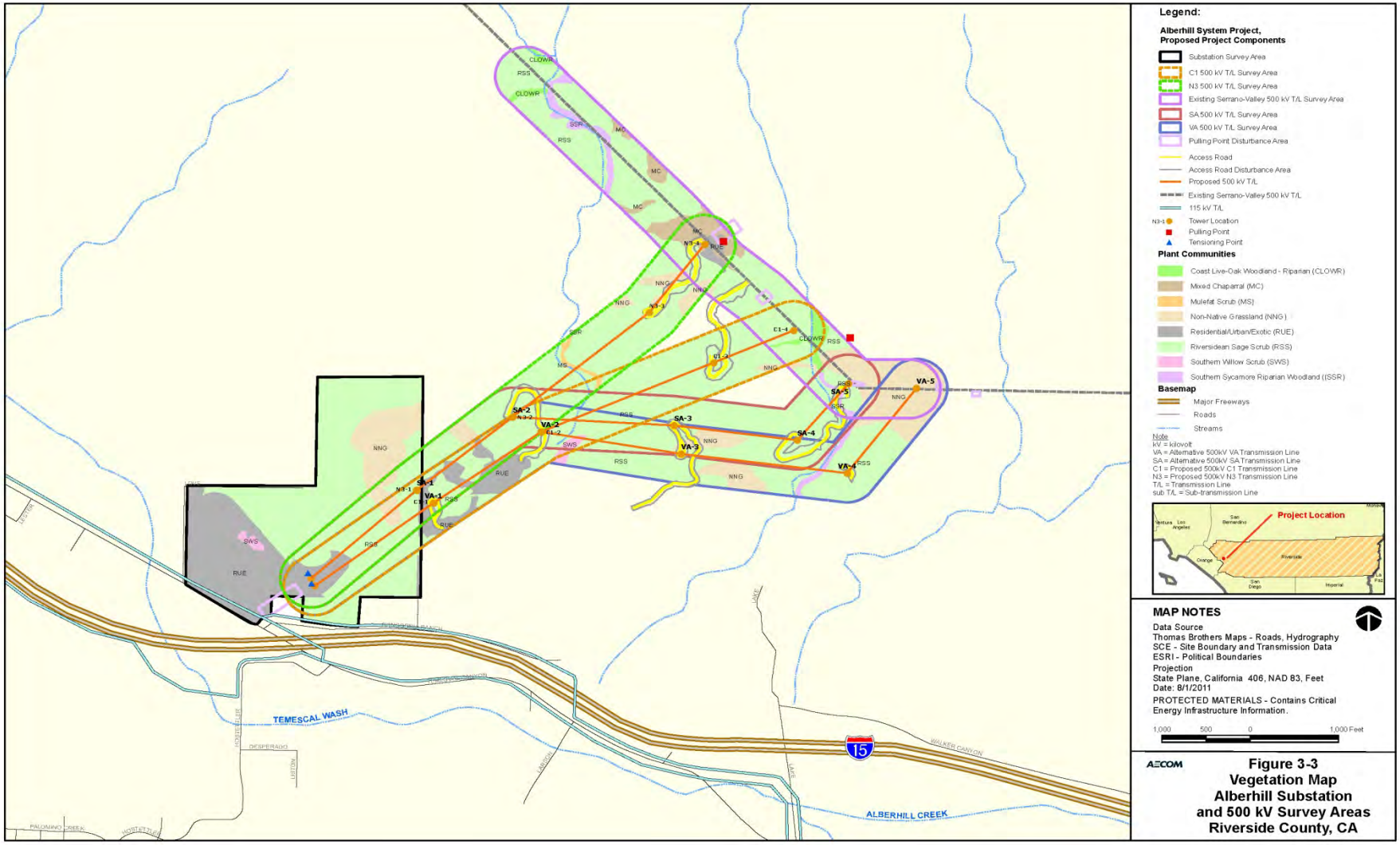
Nine vegetation communities were identified and classified by dominance of perennial species throughout the Project Area during the 2009 Biological Technical Surveys (AECOM 2009b). The vegetation community descriptions provided in this report are general and based upon *WRCMSHCP Volume II-Section C; Habitat Accounts* (Riverside County 2003). Listed below are the WRCMSHCP descriptions for the recorded vegetation communities observed within each of the survey areas, as well as a brief description of vegetation observed within each of the vegetation communities during the 2011 surveys. See Figures 3-3 and 3-4 for vegetation community maps of each of the survey areas. A plant compendium of vascular plants observed within the Project Area components can be found in Appendix B for the substation and 500-kV and 115-kV areas.

3.2.1 Chamise Chaparral

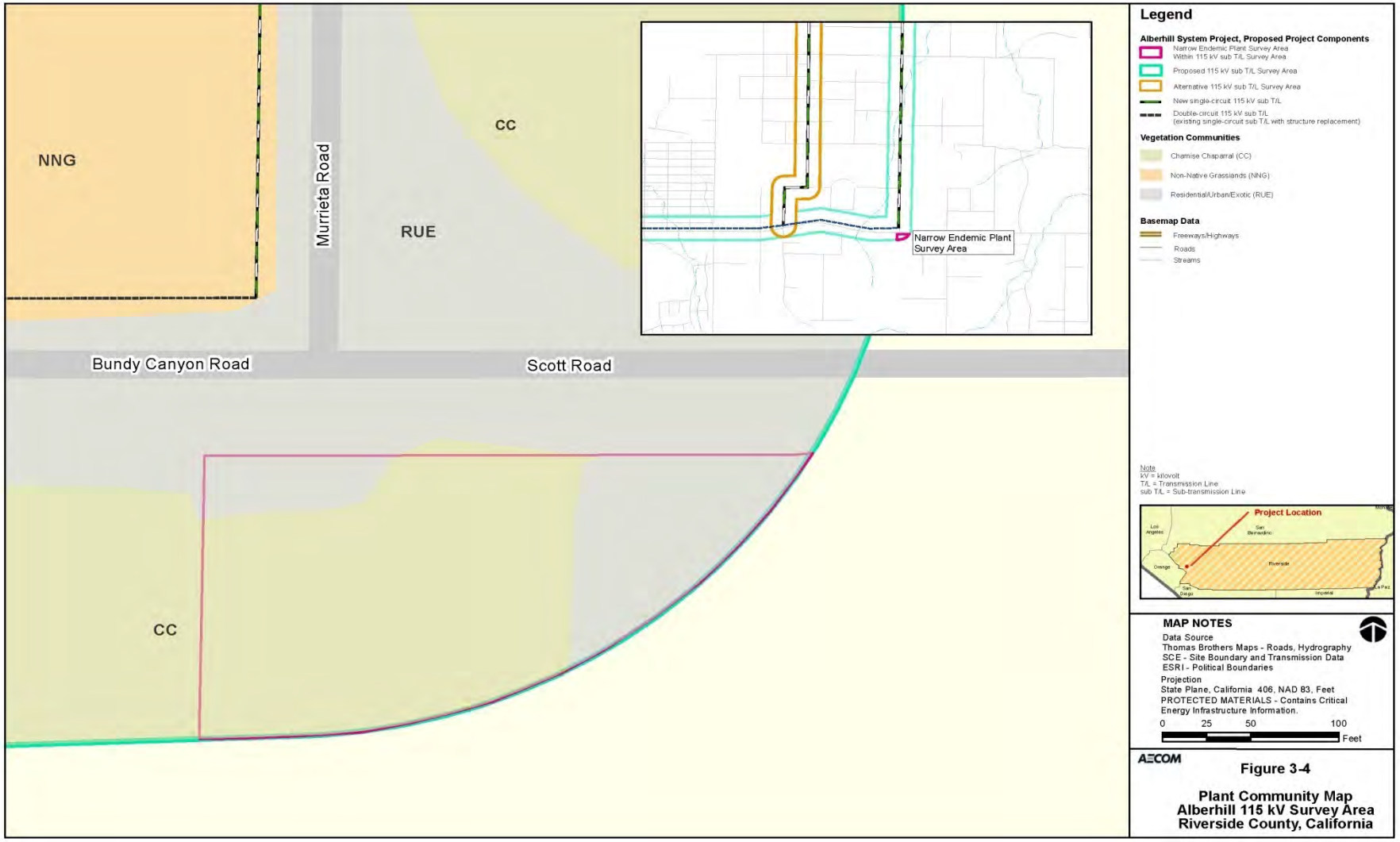
Chamise chaparral is open to dense and between 1 to 4 meters in height, with little litter and few understory species in mature stands. Recent studies describe this association as having greater than 60 percent cover chamise (*Adenostoma fasciculatum*). Where other species occur at greater than 30 percent cover but chamise remains the dominant cover, the stands are described as a mixed series (e.g., chamise-bigberry, chamise-black sage, chamise-cupleaf ceanothus, chamise-Eastwood's manzanita, etc.). Evergreen species that commonly occur at less than 30 percent cover within chamise chaparral in the WRCMSHCP area include bigberry manzanita (*Arctostaphylos glauca*), Eastwood's manzanita (*Arctostaphylos glandulosa*), mission manzanita (*Xylococcus bicolor*), scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni*), hoaryleaf ceanothus (*Ceanothus crassifolius*), our Lord's candle (*Yucca whipplei*), laurel sumac (*Malosma laurina*), sugar bush (*Rhus ovata*), toyon (*Heteromeles arbutifolia*), yerba santa (*Eriodictyon crassifolium* and *E. trichocalyx*), redberry (*Rhamnus ilicifolia*), and chaparral beard-tongue (*Keckiella antirrhinoides*).

Chamise chaparral often supports a low cover of shrubs characteristic of coastal sage scrub (e.g., black sage [*Salvia mellifera*], California buckwheat [*Eriogonum fasciculatum*], California sagebrush [*Artemisia californica*], and saw-toothed goldenbush [*Hazardia squarrosa*]). Perennial herbaceous species are few in mature stands of chamise chaparral; but cudweed (*Gnaphalium* spp.), *Sanicula* spp., southern taushia (*Tauschia arguta*), California melic (*Melica imperfecta*), lilac mariposa (*Calochortus splendens*), Bigelow's spike-moss (*Selaginella bigelovii*), and other post burn or gap specialist annuals (e.g., *Phacelia* spp., whispering bells [*Emmenanthe pendulaflora*], *Cryptantha* spp., *Plagiobothrys* spp., spineflower, evening-primrose [*Camissonia* spp.], and *Pterostegia drymarioides*) may be present.

Chamise chaparral surveyed was generally found to include the following dominant woody shrub species: chamise, hoaryleaf ceanothus, and California buckwheat (*Eriogonum fasciculatum* ssp. *foliolosum*). Dominant annual understory species observed within this plant community included woolly sunflower (*Eriophyllum multicaule*), *everlasting nest straw* (*Stylocline gnaphaloides*), common cryptantha (*Cryptantha intermedia*), sagebrush combseed (*Pectocarya linearis*), redstem filaree (*Erodium cicutarium*), sapphire woollystar (*Eriastrum sapphirinum*), chaparral gilia (*Gilia angelensis*), and miner's lettuce (*Claytonia parviflora*). Common grasses observed included red brome (*Bromus madritensis* ssp. *rubens*), rat tail fescue (*Festuca myuros*), and slender fescue (*Festuca octoflora*).



Path: Z:\Projects\SCE Projects AJ\SCE Cardiff Greenspot\GIS\MXDs\Report Figures\Rare Plant Report\Figure 3-3.mxd


NNG
Murrieta Road
CC
RUE
Bundy Canyon Road
Scott Road
CC
Narrow Endemic Plant Survey Area
Legend
Alberhill System Project, Proposed Project Components
Narrow Endemic Plant Survey Area Within 115 kV sub T/L Survey Area
Proposed 115 kV sub T/L Survey Area
Alternative 115 kV sub T/L Survey Area
New single-circuit 115 kV sub T/L
Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
Vegetation Communities
Chamise Chaparral (CC)
Non-Native Grasslands (NNG)
Residential/Urban/Exotic (RUE)
Basemap Data
Freeways/Highways
Roads
Streams
Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line
Project Location
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 25 50 100
Feet
AECOM
Figure 3-4
Plant Community Map
Alberhill 115 kV Survey Area
Riverside County, California

3.2.2 Coast Live Oak Woodland Riparian

Coast live oak woodland occurs on cooler, steeper slopes and will occur on terraces adjacent to the stream channels forming the interior of the woodland canopy. Coast live oak woodlands vary from savanna-like, with few to no woody associates, to dense woodlands. Coast live oak trees (*Quercus agrifolia*) can reach a canopy height of 30 meters but usually vary from 9 to 22 meters. Canopy coverage varies from continuous to open.

Understory plants in coast live oak woodland are shade tolerant. Understory composition includes wild blackberry (*Rubus ursinus*), gooseberry (*Ribes* spp.), toyon, manzanita (*Arctostaphylos* spp.), laurel sumac, and poison oak (*Toxicodendron diversilobum*). Characteristic herbaceous plants are polypody fern (*Polypodium californicum*), fiesta flower (*Pholistoma auritum*), and miner's lettuce.

Coast live oak woodland surveyed was generally found to include the following dominant woody tree and shrub species, coast live oak, Mexican elderberry (*Sambucus mexicana*), laurel sumac*,* and poison oak*.* Dominant annual and perennial understory species observed within this plant community included hedge nettle (*Stachys ajugoides),* fiesta flower*,* mugwort (*Artemisia douglasiana*)*,* cocklebur (*Xanthium strumarium*), watercress (*Rorippa nasturtium-aquaticum*), chickweed (*Stellaria media*), wild cucumber (*Marah macrocarpus*), annual stinging nettle (*Urtica urens*), and common monkeyflower (*Mimulus guttatus*). Common grasses observed included ripgut (*Bromus diandrus*).

3.2.3 Mixed Chaparral

In the western portion of the WRCMSHCP area (e.g., the Santa Ana Mountains, Agua Tibia Mountains) undifferentiated chaparral is dominated by chamise in drier habitats and by a more diverse mixture of species in more mesic areas (analogous to southern mixed chaparral, Holland 1986). Species composition ranges from that described for chamise chaparral (see above) to more diverse shrub associations supporting hoaryleaf ceanothus, toyon, sugar bush, holly-leaf redberry (*Rhamnus ilicifolia*), heart-leaved penstemon (*Keckiella cordifolia*), southern honeysuckle (*Lonicera subspicata*), scrub oak, black sage, and other species.

The central portion of the WRCMSHCP area (*e.g.*, the Gavilan Hills, Sedco Hills, and Black Hills) where the 500-kV and 115-kV study areas occur, is lower in elevation and supports a drier expression of chaparral, with abundant stands of chamise along with more arid climate chaparral species (e.g., jojoba [*Simmondsia chinensis*], chaparral beard-tongue, and desert thorn [*Lycium andersonii*]) and Riversidean Sage Scrub (e.g., brittlebush [*Encelia farinosa*], California buckwheat, and white sage [*Salvia apiana*]). Mesic areas (e.g., north-facing slopes, narrow ravines) in this region support southern mixed chaparral or red shank chaparral.

Mixed chaparral surveyed was generally found to include the following dominant woody shrub species: chamise, hoaryleaf ceanothus, black sage, deerweed (*Lotus scoparius*), California buckwheat, mountain mahogany (*Cercocarpus betuloides*), hollyleaf cherry (*Prunus ilicifoloia*), showy penstemon (*Penstemon spectabilis*), and chaparral mallow (*Malacothamnus fasciculatus*). Dominant annual and perennial understory species observed within this plant community included royal goldfields (*Lasthenia coronaria*), white pincushion (*Chaenactis artemisiifolia*), California chicory (*Rafinesquia californica*), everlasting nest straw, popcornflower (*Plagiobothrys canescens*), stinging lupine (*Lupinus hirsutissimus*), annual lupine (*Lupinus bicolor*), filaree (*Erodium* sp.), chia (*Salvia columbariae*), and California sun cup (*Camissonia bistorta*).

3.2.4 Mulefat Scrub

Mulefat scrub is dominated by mulefat (*Baccharis salicifolia*) but may also include willows, sedges, and stinging nettle (*Urtica dioica*).

Mulefat scrub surveyed was generally found to include the following dominant woody shrub species and annual and perennial understory species: mulefat, annual burrweed (*Ambrosia acanthicarpa*), and telegraphweed (*Heterotheca grandiflora*).

3.2.5 Nonnative Grasslands

Nonnative grasslands primarily consist of annual grass species introduced from the Mediterranean basin and other Mediterranean-climate regions with variable presence of nonnative and native herbaceous species. Species composition of nonnative grasslands may vary over time and place based on grazing or fire regimes, soil disturbance, and annual precipitation patterns. Nonnative grasslands typically produce deep layers of organic matter which is inversely related to the abundance of nonnative and native forbs. Nonnative grasslands are likely to be dominated by several species of grasses, including slender oat (*Avena barbata*), wild oat (*Avena fatua*), fox tail chess (*Bromus madritensis*), soft chess (*Bromus hordeaceus*), ripgut grass, barley (*Hordeum* spp.), rye grass (*Lolium multiflorum*), English ryegrass (*Lolium perenne*), rat tail fescue, and Mediterranean schismus (*Schismus barbatus*), that have evolved to persist in concert with human agricultural practices. Nonnative grasslands also typically support an array of annual forbs from the Mediterranean climate regions (e.g., red-stemmed filaree, broad-lobed filaree [*Erodium botrys*], mustard [*Brassica* spp.], shortpod mustard [*Hirschfeldia incana*], wild radish [*Raphanus sativus*], *Centaurea* spp., Italian thistle [*Carduus pycnocephalus*], common catchfly [*Silene gallica*], *Medicago* spp., and *Hypochaeris* spp.). Low abundance of native species is sometimes observed within nonnative grasslands. Native species occurring in nonnative grasslands usually include disturbance specialists with several different growth forms: subshrubs (e.g., *Lotus* spp., *Eriogonum* spp., *Lessingia* spp., *Isocoma* spp., *Ericameria* spp.); cholla (*Opuntia* spp.); perennial geophytes (e.g., blue dicks); and herbaceous annuals (e.g., dove weed [*Eremocarpus setigerus*], vinegar weed [*Trichostemma lanceolatum*], and tarplant).

Nonnative grasslands surveyed were generally found to include the following dominant grass and annual herbaceous species: slender oat, wild oat, ripgut, red brome, rat tail fescue, foxtail barley (*Hordeum murinum*), redstem filaree, tocalote (*Centaurea melitensis*), prickly lettuce (*Lactuca serriola*), shortpod mustard, fiddleneck (*Amsinckia intermedia*), dove weed, burclover (*Medicago polymorpha*), horehound (*Marrubium vulgare*), and cheeseweed (*Malva parviflora*).

3.2.6 Residential/Ruderal/Urban/Exotic

Developed areas are lands that are permanently altered by human activities. These areas include roads, buildings, and associated areas where native plant communities cannot become or are prevented from becoming re-established. Developed areas include all existing facilities, access roads (paved and dirt), and actively managed areas (i.e., fire breaks and staging areas). Although these areas may at times contain vegetation, they are routinely mowed or cleared to preclude further vegetation establishment or for brush clearance, per local fire ordinance requirements. The ruderal plant community occurs in areas exhibiting a high level of disturbance, where natural colonization has favored nonnative weedy forbs (herbaceous nongrass species) and nonnative grasslands that are adapted to a regime of frequent disturbances.

The following four categories are also included as a component of this plant community: tree grove, street strip, shade tree/lawn, and shrub cover. Tree groves are in parks, green-belts, and cemeteries where a continuous or intermittent canopy is formed; and ground coverage varies (McBride and Reid 1988). Street strips and shade trees and lawns generally do not have a continuous cover and vary widely in species and structure. These two categories are distinguished by their location. Shrub cover is the most limited vegetation type, also occurring as a variety of species and structures. A result of these largely ornamental plantings is the establishment of escaped exotics, defined as species originally planted for ornamental or agricultural purposes, which have invaded historically

natural plant communities. Some commonly escaped exotic species include: acacias (*Acacia* spp.), pepper-trees (*Schinus* spp.), pampas grass (*Cortaderia* spp.), and English ivy (*Hedera helix*).

In addition to the vegetation community types listed above, many areas do not support any vegetation.

Weed communities are also common in urban areas, often occurring on roadsides and abandoned areas. In larger areas, these weed populations may represent the early stages of natural succession. Some of these areas are known as ruderal communities. A ruderal community occupies waste areas and roadsides, often on heavily compacted soils having little available oxygen. Typical species include wild oat, bromes, tocalote, mustard, pineapple-weed (*Chamomilla suaveloens*), common knotweed (*Polygonum aviculare*), sowthistle (*Sonchus oleraceus*), horseweed (*Conyza canadensis*), and goosefoot (*Chenopodium* spp.).

Residential urban and exotic areas surveyed were generally found to include the following dominant woody tree and shrub species: red gum (*Eucalyptus camaldulensis*), sugargum (*Eucalyptus cladocalyx*), poplar box (*Eucalyptus populnea*), Canary Island pine (*Pinus canariensis*), Aleppo pine (*Pinus halepensis*), Italian stone pine (*Pinus pinea*), Peruvian peppertree (*Schinus molle*), catalpa (*Catalpa* sp), walnut (*Juglans* sp., cultivated), mulberry (*Morus alba*), and olive (*Olea europaea*). Dominant annual grasses and annual herbaceous species observed within this plant community included ripgut, London rocket (*Sisymbrium irio*), horehound, pigweed amaranth (*Amaranthus albus*), and prickly lettuce.

3.2.7 Riversidean Sage Scrub

A majority of coastal sage scrub in Riverside County is contained in the Riversidean sub-association (Riverside County 2003). Riversidean Sage Scrub typically is found on xeric sites, in most cases steep, south-facing slopes with thin and or rocky soils (Riverside County 2003). Sage scrub is often distributed in patches throughout its range (Riverside County 2003). As expressed within the survey area, coastal sage scrub can be found in diverse habitat mosaics with other plant communities, particularly grassland and chaparral (Riverside County 2003). Coastal sage scrub may convert to chaparral or grassland, depending on slope, aspect, climate, fire history, and other physical factors; conversely, chaparral or grassland areas may convert to coastal sage scrub (Riverside County 2003).

A recent classification of sage scrub in western Riverside County has identified up to seven sub-associations based upon dominant shrub cover (Riverside County 2003). These sub-associations include California sagebrush, California buckwheat, California sagebrush-California buckwheat, California sagebrush-white sage, brittlebush, black sage, and California broom (Riverside County 2003).

Riversidean Sage Scrub surveyed was generally found to include the following dominant woody shrub species: brittlebush, California sagebrush, deerweed, California buckwheat, sweetbush (*Bebbia juncea*), Palmer's goldenbush (*Ericameria palmeri*), morning glory (*Calystegia macrostegia*), laurel sumac (scattered), black sage, and wishbone bush (*Mirabilis laevis*). Dominant annual and perennial understory species observed within this plant community included common tarplant (*Hemizonia fasciculata*), Kellogg's tarplant (*Hemizonia kelloggii*), fiddleneck, common cryptantha, sagebrush combseed, Cooper's popcornflower (*Plagiobothrys collinus*), filaree, spurge (*Euphorbia polycarpa*), Coulter's lupine (*Lupinus sparsiflorus*), annual lupine, common phacelia (*Phacelia distans*), and California bluebell (*Phacelia minor*). Common grasses observed included ripgut brome, red brome, slender wild oat, one sided blue grass (*Poa secunda*), and California melic.

3.2.8 Southern Sycamore Riparian Forest

Below 2,000 meters in elevation, sycamores normally occur along seasonally-flooded banks with cottonwoods and willows. Poison oak, mugwort, Mexican elderberry, and wild raspberry may be present in the understory. Sycamores are able to withstand long periods of flooding.

Southern sycamore riparian forest surveyed was generally found to include the following dominant woody shrub species and annual and perennial understory species: sycamore (*Platanus racemosa*), poison oak, giant reed (*Arundo donax*), and mugwort.

3.2.9 Southern Willow Scrub (SWS)

Southern Willow Scrub is dominated by willow (*Salix* spp.) with gooseberry and Mexican elderberry. When disturbance is high within this habitat type, the dominant species typically is sandbar willow (*Salix exigua*). When disturbance is less, the dominance shifts to Goodding's black willow (*Salix gooddingii*). Willows are fast-growing and can reproduce vegetatively from root sprouts. Red willow (*Salix laevigata*) occupies fast-flowing perennial streams at elevations up to 1,200 meters and may occur with yellow willow (*Salix lasiandra*).

Yellow willow grows along stream channels and in perennially wet places at elevations below 2,500 meters. Sandbar willow occurs along sandbars and riverbeds at elevations below 900 meters. Arroyo willow (*Salix lasiolepis*) occupies habitat within perennial and intermittent stream channels at elevations up to 1,500 meters. Goodding's black willow occurs along stream banks and in wet places within drier habitats at elevations below 450 meters.

Southern willow scrub surveyed was generally found to include the following dominant woody shrub species and annual and perennial understory species: Goodding's black willow, red willow, arroyo willow, mulefat, giant reed, ragweed (*Ambrosia psilostachya*), rush (*Juncus* sp.), poison oak, and willow dock (*Rumex salicifolius*).

3.3 Climate

Climate conditions within the Project Area are characterized as a semi-arid, Mediterranean-type, with hot, dry summers and a relatively wet rainy season during winter and spring. Temperatures during the summer may exceed 95°F, with August being the hottest month. Summer temperatures are usually combined with a relatively low humidity. Winter temperatures are maintained around 55°F with variable humidity, depending on the precipitation events. Precipitation is sporadic throughout the rainy season (November to May), with January usually being the wettest month.

According to the nearest weather station to the Project Area (Riverside, CA), the following are monthly temperature averages for the Lake Elsinore Area:

Table 3-1. Monthly temperature averages for the region (Riverside, CA)

March	April	May	June
55°F	59°F	64°F	70°F

Source: www.weatherbase.com

*averages based on 59 years of data records.

The following table lists the monthly rainfall measurements during the 2010-2011 rainy season, according to the Riverside County Flood Control, Lake Elsinore Station (#67).

Table 3-2. 2010-2011 Monthly Rainfall Totals for the Project Area Based on the Lake Elsinore, CA Sampling Station #67 (Rainfall in inches)

July 2010	August 2010	September 2010	October 2010	November 2010	December 2010	January 2011	February 2011	March 2011	April 2011	May 2011	June 2011
0.05	0.09	0.0	1.21	0.52	7.56	0.39	2.19	2.10	0.33	0.35	*0.06

Source: Riverside County Flood Control, 2011
*Data collection error recorded from station 67 for 13 missing days in June 2011 (June 18-30).

Riverside County Flood Control rainfall data collected from 2008-2009 in the Lake Elsinore area, the annual total rainfall for the 2008-2009 rainy season was approximately 8.00 inches (AECOM 2009). The annual total rainfall for the Lake Elsinore area for 2009-2010 was approximately 9.06 inches (Riverside County Flood Control 2010). The annual total rainfall for the Lake Elsinore area for 2010-2011 is approximately 14.85 inches (Riverside County Flood Control 2011).

The majority of the rainfall during the 2010-2011 rainy season occurred between October and December (approximately 9.43 inches), immediately prior to the germination and blooming period of most plant species. An additional 5.42 inches of rain was recorded during the germination and growth season. The annual rainfall total for 2010-2011 was approximately 40 percent higher than the previous two years.

4.0 Results

4.1 Survey Schedule and Environmental Conditions

Based on the target species' peak blooming periods, two survey periods were scheduled: one during early to mid spring, and the other during mid to late spring. The field survey days were:

- Survey Period 1- April 6 through 8,11 through 13, 15,18 through 22, and 25 through 26, for a total of 14 survey days, and
- Survey Period 2-May 24, 26 through 27, 31 and June 2, 3, 6, and 7, for a total of eight survey days.

Surveyors during the 2011 Alberhill sensitive plant surveys included: Teresa Salvato, UCR Herbarium and AECOM biologist; Dave Charlton, AECOM botanist; Tim Searl, AECOM biologist; and Matthew Mallé, AECOM biologist. Appendix C contains a table that summarizes the number of surveyors and the hours each surveyor worked for each survey day. Table 4-1 below summarizes the environmental conditions recorded for each of the survey days.

Table 4-1. Environmental Conditions

Date	Time	Weather (°F)
4/6/2011	0700-1730	50/70 Slightly breezy, 2-4 mph wind direction southeast, ~ 80 % cloud coverage.
4/7/2011	1500-1900	60/65 Slightly breezy, wind direction east, 1-3 mph. ~ 90 % cloud coverage. Drizzle, earlier today.
4/8/2011	0700-1500	45/60 Still to occasional gusts, 2-5 mph. Wet from precipitation event earlier in AM. Cloud coverage ~ 40%
4/11/2011	0700-1500	50/77 Still to occasional gust from east. Cloud coverage ~ 40 percent.
4/12/2011	0700-1500	50/77 Cool breeze from southeast, approx. 1-3 mph. Clear and sunny
4/13/2011	0630-1130	50/70 Slight breeze from northeast, 1-3 mph. Clear and sunny.
4/15/2011	0630-1400	50/90 Still in AM and occasional gusts in PM, 5-10 mph. Clear and sunny.
4/18/2011	0630-1530	55/65 Still. Overcast and moist (fog) with slight drizzle. 100% cloud coverage.
4/19/2011	0630-1530	60/75 Still. Cloud coverage 100% heavy marine layer. Moist and cool.
4/20/2011	0630-1500	60/75 Still. Cloud coverage 100% heavy marine layer. Moist and cool.
4/21/2011	0630-1530	55/77 Still. Heavy marine layer, moist. 100% cloud coverage.
4/22/2011	0630-1430	55/75 Still. Partly cloudy, 50% coverage.
4/25/2011	0630-1200	55/80 Slight breeze from southeast, partly cloudy, ~ 20% cloud coverage.
4/26/2011	0630-0930	60/70 Slight breeze from southeast, partly cloudy, ~ 20% cloud coverage.
5/24/2011	0630-1430	65/75 Slight breeze from west/southwest. Partly cloudy, ~ 30% cloud coverage.
5/26/2011	0630-1430	60/80 Slight breeze from east, 1-3 mph. Heavy marine layer, ~ 90% cloud coverage.
5/27/2011	0630-1430	60/85 Slight breeze from southwest, 1-3 mph. Clear and sunny.
5/31/2011	0630-1430	55/88 Slight breeze from northeast, 1-3 mph. Sunny and clear. ~10% cloud coverage.
6/2/2011	0630-1430	55/80 Slight breeze from northeast, 1-3 mph. Sunny and clear. ~ 5% cloud coverage.
6/3/2011	0630-1430	60/85 Slight breeze from south 1-3 mph. Sunny and clear.
6/6/2011	0630-1430	60/70 AM, Still. Sunny, partly cloudy, ~40 % cloud coverage. PM, slight breeze from southwest, 3-5 mph. Cloud coverage ~ 75%.
6/7/2011	1000-1200	70/75 Slight breeze from northeast, 1-3 mph. Clear and sunny.

4.2 Voucher Specimen Review

Voucher specimen review occurred on April 5 and May 19, 2011. All 22 specimens of sensitive plant species determined to have a moderate to high potential to occur within the Project Area were reviewed at the UCR Herbarium.

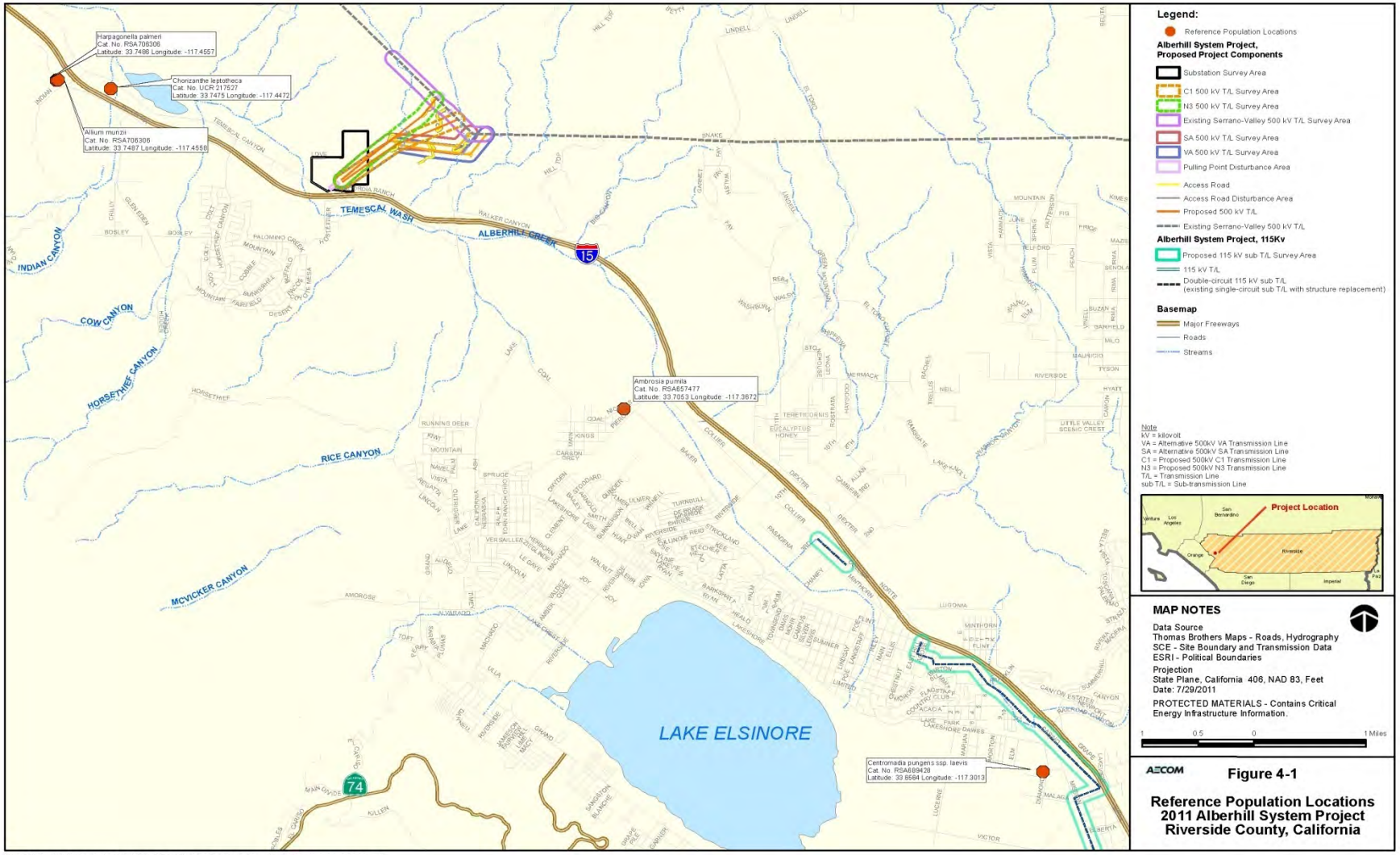
Voucher specimens reviewed include:

- Munz's onion (*Allium munzii*)
- San Diego ambrosia (*Ambrosia pumila*)
- round-leaved filaree (*California* [=*Erodium*] *macrophylum*)
- Plummer's Mariposa lily (*Calochortus plummerae*)
- intermediate Mariposa lily (*Calochortus weedii* var. *intermedius*)
- smooth tarplant (*Hemizonia* [*Centromadia*] *pungens ssp. laevis*)
- Payson's jewel flower (*Caulanthus simulans*)
- peninsular spineflower (*Chorizanthe leptotheca*)
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*)
- long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)
- small-flowered morning glory (*Convolvulus simulans*)
- slender-horned spineflower (*Dodecahema leptoceras*)
- many-stemmed dudleya (*Dudleya multicaulis*)
- Palmer's grappling hook (*Harpagonella palmeri)*
- paniculate tarplant (*Dienandra (Hemizonia) paniculata*)
- Robinson's peppergrass (*Lepidium virginicum* var. *robinsoni*)
- small-flowered microseris (*Microseris douglasii* var. *platycarpha*)
- white rabbit-tobacco (*Gnaphalium* [*Pseudognaphalium*] *leucocephalum*)
- Coulter's matilijia poppy (*Romneya coulteri*)
- southern mountain skullcap (*Scutellaria bolanderi*)
- bottle liverwort (*Sphaerocarpos drewei*)
- San Bernardino aster (*Aster bernardinus*).

See Appendix D for a table summarizing each of the target sensitive plant species' regulatory status, blooming period, and habitat preferences.

4.3 Reference Population Survey

As mentioned previously, only reference populations for federal and state listed taxa were visited. Reference populations of Munz's onion, San Diego ambrosia, and Palmer's grapplinghook were located on April 6, 2011, and smooth tarplant and peninsular spineflower on May 24, 2011, by UCR Herbarium botanist Teresa Salvato and AECOM biologist Matthew Mallé (See Figure 4-1).



Path: Z:\Projects\2011 surveys\Alberhill\ArcGIS\Final\Plant report\figure 4-1 sensitive plant reference population.mxd

4.3.1 Munz's Onion Reference Population

The Munz's onion reference population that was visited is located within the Sycamore Canyon Nature Reserve. The site visited is associated with a previously collected voucher specimen, Herbarium Catalog Number RSA706306. The specific location of the Sycamore Canyon Nature Reserve can be found on the Alberhill, CA 7.5-minute USGS topographic quadrangle (1980). The Sycamore Canyon Nature Reserve site is located within the northeast ¼ of Section 12, Township 5 South, Range 6 West. The elevation of the Munz's onion reference population is approximately 1,200 feet asl.

The Munz's onion reference population is located on the northwest corner of the intersection of Campbell Ranch Road and Indian Truck Trail; approximately 2.5 miles northwest of the proposed Alberhill Substation. Three distinct populations were delineated by exclusion fencing, with individual bulbs marked with pin flags. It is suspected that the reference population was part of a monitoring program associated with a revegetation effort. Munz's onion was in bloom during the reference site visit. Approximately 25 individuals were observed between the two monitoring plots. Both populations were located on a gentle, south-facing slope. Soils in the area were noted to be well developed clay containing rock-cobble. Associated native species noted during the visit include: California goldfields (*Lasthenia* sp.), tidy tips (*Layia platyglossa*), blue dicks (*Dichelostemma capitatum*), California plantain (*Plantago erecta*), and amsinckia *(Amsinckia* ssp.). Associated nonnative grass and herbaceous annuals observed include red brome, soft chess, and red-stemmed filaree.

Photos of the Munz's onion reference population and surrounding habitat can be found in Appendix A.

4.3.2 San Diego Ambrosia Reference Population

The San Diego ambrosia reference population that was visited is located along Nichols Road in the Lake Elsinore, CA. The site visited is associated with a previously collected voucher specimen, Herbarium Catalog Number RSA657477. The specific location of the San Diego ambrosia can be found on the Lake Elsinore, CA 7.5-minute USGS topographic quadrangle (1997). The San Diego ambrosia reference population is located within the southeast ¼ of Section 26, Township 5 South, Range 5 West. The elevation of the San Diego ambrosia reference population is approximately 1,340 feet asl.

The San Diego ambrosia reference population was observed within nonnative grassland habitat in a flat area north of Nichols Road, approximately 0.5 mile west of the intersection of Nichols Road and Collier Road. The San Diego ambrosia reference population is located approximately 3.2 miles southeast of the proposed Alberhill Substation. Approximately 25 individual San Diego ambrosia plants were counted during the reference site visit. All individuals encountered were vegetative (non-blooming) but were identified in spite of the lack of flowering structures by UCR Botanist Teresa Salvato. Soils were noted to be well developed clay with rock. Associated nonnative grass and herbaceous annuals observed include foxtail (*Hordeum murinum*) and red-stemmed filaree.

Photos of the San Diego ambrosia reference population and surrounding habitat can be found in Appendix A.

4.3.3 Palmer's Grapplinghook Reference Population

The Palmer's grapplinghook reference population was discovered during the visit to the Munz's onion reference population. The site visited is within the vicinity of a previously collected voucher specimen, Herbarium Catalog Number RSA387391. The discovered reference population located adjacent to

the Munz's onion reference population is not currently vouchered, but is also located within the Sycamore Canyon Nature Reserve described above.

The Palmer's grapplinghook reference population is located on the northwest corner of the intersection of Campbell Ranch Road and Indian Truck Trail; approximately 2.5 miles northwest of the proposed Alberhill Substation. A single plant was observed within nonnative grassland habitat. The observed plant was in bloom during the reference site visit. The plant was located on a gentle, south-facing slope. Soils in the area were noted to be well developed clay containing rock-cobble. Associated native species noted during the visit include: California buckwheat, needle goldfields (*Lasthenia gracilis*), tidy tips, and popcornflower (*Plagiobothrys collinus*). Associated nonnative grass and herbaceous annuals observed include red brome and soft chess.

4.3.4 Smooth Tarplant Reference Population

The smooth tarplant reference population that was visited is associated with the general locality of a previously collected voucher specimen (Catalog Number RSA689428). The specific location of the smooth tarplant can be found on the Lake Elsinore, CA 7.5-minute USGS topographic quadrangle (1988). The smooth tarplant reference population is located within the southwest ¼ of the southeast ¼ of Section 9, Township 6 South, Range 4 West. The elevation of the smooth tarplant reference population is approximately 1,280 feet asl.

The smooth tarplant reference population is located approximately 150 feet southwest of the Diamond Drive and Campbell Street intersection, within a flat vacant field in Lake Elsinore, CA. Approximately 20 plants were observed in nonnative grassland habitat and associated with a vernal feature. The observed plants were in bloom during the reference site visit. Soils in the area were clay. Associated native species noted during the visit include: loosestrife (*Lythrum* sp.), sedge (*Carex* sp.), cudweed (*Pseudognaphalium* sp.), and alkali weed (*Cressa truxillensis*). Associated nonnative grass and herbaceous annuals observed include: annual beard grass (*Polypogon monspeliensis*), prostrate knotweed (*Polygonum aviculare*), and sand spurry (*Spergularia bocconi*),

4.3.5 Peninsular Spineflower Reference Population

The peninsular spineflower reference population that was visited is located along Temescal Valley Road in Corona, CA. The site visited is within the vicinity of a previously collected voucher specimen, Herbarium Catalog Number UCR 217527. The specific location of the peninsular spineflower can be found on the Alberhill, CA 7.5-minute USGS topographic quadrangle (1997). The peninsular spineflower reference population is located within the northwest ¼ of Section 7, Township 5 South, Range 5 West. The elevation of the smooth tarplant reference population is approximately 1,240 feet asl.

The peninsular spineflower reference population is located in the Perris-Aguanga Basin of Temescal Canyon between Highway I-15 and Temescal Canyon Road, south of the west end of Lee Lake. Approximately 100 plants were observed within alluvial scrub on a series of alluvial shelves, east of a well developed dry wash. The observed plants were in bloom during the reference site visit. Soil in the area was sand. Associated native species noted during the visit include: scalebroom (*Lepidospartum squamatum*), California sycamore, cudweed, California buckwheat, bindweed (*Calystegia macrostegia*), chia, sun cup, and common cryptantha (*Cryptantha intermedia*). Associated nonnative herbaceous annuals observed include: short-podded mustard (*Brassica geniculata*).

4.4 Sensitive Plant Species Observed On Site

Of the 19 species with potential to occur within the Project Area, 6 were observed during the sensitive plant surveys conducted during Spring 2011. Below is a brief description of each of the observed sensitive plant species. Appendix E contains figures of the sensitive plant species locations observed within each of the survey areas.

Photos of survey areas and select photos of key species can be found in Appendix A.

4.4.1 Parry's Spineflower (*Chorizanthe parryi var. parryi*)

Parry's spineflower (CNPS listed 1B.1) is generally spreading to erect, from 0.5 to 4 cm in height. The stem is hairy, and leaf blades are 1 to 3 cm long and 0.4 to 0.8 cm wide. Inflorescence is characterized by generally 2 bracts and a whorl of 3 to 5 at the middle. The awns are straight and 1 to 3 mm long. The involucres awns are hooked. The 6 teeth are 1 to 2 mm long,the axial is long with awns from 0.5 to 1 mm. One flower is present and is 2.5 to 3mm wide and hairy, and the perianth is 2-colored with the floral tube green-white. The lobes are white, with the outer petal generally fringed, and the inner petal narrower and entire or toothed. Stamens are 9. The species is found in sand, from 90 to 800 m asl within the eastern Transverse Ranges and northwest edge of the Sonoran Desert. Blooming period is from May to June (Hickman, J.C. Ed. 1993, [online interchange 2011]).

4.4.2 Long-Spined Spineflower (*Chorizanthe polygonoides var. longispina*)

Long-spined spineflower (CNPS listed 1B.2) is generally a small, inconspicuous, annual herb. The stem is prostrate, 1 to 15 cm, generally greenish or reddish in color, and soft to hairy. The leaf blade is usually 3 to 10 mm and thinly hairy. The inflorescence is bell-shaped, 3-angled, often reddish, and thinly hairy with prominent bracts. This particular variety's involucre (including awns) length is generally 3 to 4 mm, the tube is 1.5 to 2 mm, and its bracts sometimes only 3 mm, usually at a length of 2 to 3 mm including awns. This species is generally associated with chaparral habitat within the Peninsular Ranges (Hickman 1993).

4.4.3 Paniculate Tarplant (*Deinandra [=Hemizonia] paniculata*)

Paniculate tarplant (CNPS listed 4.2) is a small annual, 10 to 80 cm tall. It is generally bristly below and glandular above. The basal leaves are linear to oblanceolate (1 to 10 cm), deeply toothed or lobed; upper leaves are linear and entire. Inflorescence heads are solitary, long-peduncled; involucres are generally 5 to 7 mm; and phyllaries are densely glandular. There are usually 8 to 13 ray flowers; each ligule 3.5 to 6 mm, and the color a deep yellow. There are usually 8 to 13 disk flowers, fertile or staminate, with yellow corollas and black anthers. The fruits of this species are usually 2.5 to 3 mm long and are beaked. This species is generally associated with dry foothills and mesas, within the South Coast and Southwest Peninsular ranges (Hickman 1993).

4.4.4 Robinson's Peppergrass (*Lepidium virginicum* var. *robinsonii*)

Robinson's peppergrass (CNPS listed 1B.2) is an herbaceous annual defined by erect, pointed stems; usually 4 to 20 cm tall. Dense hairs are persistent on the stem; and leaves are cauline, divided, or lobed, with narrow segments, 1 to 2 mm wide. The inflorescence is described as a more or less flat pedicel, generally winged with hairs. The species is observed within dry soils, in scrub communities. Its elevation range is less than 500 m asl, and it is found throughout southwest California.

4.4.5 Small-Flowered Microseris (*Microseris douglasii* var. *platycarpha*)

Small-flowered microseris (CNPS listed 4.2) is a scapose, herbaceous annual, approximately 5 to 60 cm tall. Leaves are approximately 3 to 25 cm in length. The inflorescence is described as having involucres 7 to 16 mm in length, with outer phyllaries being deltate (much less than inner phyllaries). Flowers number from 5 to 100 or more, with ligule flowers being yellow or white in color. Fruits of this variety are gray to brown or blackish, often dark spotted; 3 to 4.5 mm in width, with the widest part of the fruit at the tip. Pappus scales are approximately 2 to 7 mm in length, generally longer in length than the fruit, and become curved, more-or-less inrolled. Pappus bristles are approximately 1 to 4 mm in length. This species is generally associated with inland clay soils within grassland habitat, often near vernal pools and serpentine outcrops (Hickman 1993).

4.4.6 Coulter's Matilija Poppy (*Romneya coulteri*)

Coulter's matilija poppy (CNPS listed 4.2) is subshrub-shrub in size, approximately 100 to 250 cm in height. The root system is composed of creeping rhizomes with a colorless sap. Leaves are cauline, gray-green-glaucus, with 3 to 5 deep lobes. Leaf shape is lanceolate to ovate. The flower size is the largest of any California plant. Buds are erect, with three sepals and six petals that are free, ovate, crinkled, white, and shed after fruiting. Many stamens are present and are free, and ovary chambers number 1 to 12. No style is present, and stigma lobes are 7 to 12. The fruits are oblong to ovate, dehiscent from the top, and bristly. The fruit size is 3 to 4 cm. Seeds are papillate and dark brown. The species is found within dry canyon washes, below 1,200 m asl. Blooming period is from March through July (Hickman 1993, [online interchange 2011]).

4.5 Summary of Sensitive Plant Observations within Each of the Survey Areas

Five CNPS listed plant species were observed during Spring 2011 surveys within the proposed Project Areas. Discussed below are the observed sensitive plant species and a brief synopsis for the type of habitat where the species were found.

Appendix F contains the completed California Native Species Survey Forms for each of the observed sensitive plant populations.

4.5.1 Substation

Four sensitive plant species (Robinson's peppergrass, long-spined spineflower, paniculate tarplant, and small-flowered microseris) were observed within the parcel boundaries of the proposed Alberhill Substation site.

Fourteen separate populations of Robinson's peppergrass were observed within nonnative annual grassland and Riversidean Sage Scrub habitat north of the anticipated area of the proposed substation location. Robinson's peppergrass was generally associated with south-facing slopes in rocky soils in open areas between shrubs and grasses.

Two separate populations of long-spined spineflower were observed within open areas north of the anticipated area of the proposed substation location. Long-spined spineflower populations in the Alberhill Substation survey area are generally associated with previously disturbed habitat within Riversidean Sage Scrub. The bulk of the larger long-spined spineflower population was observed within an unimproved dirt road. The species was also observed within open, shallow clay lenses.

Five separate populations of paniculate tarplant are located within disturbed habitat in a former livestock grazing pen at the southeast corner of the Alberhill Substation survey area. Areas where paniculate tarplant was observed are located outside the anticipated area of the proposed substation location. The paniculate tarplant generally occupies a localized region along the hills within scattered drainage patterns.

One small population of small-flowered microseris was observed within the unimproved dirt road where the larger population of long-spined spineflower was observed (described above).

Appendix E-1 depicts the location of the observed sensitive plant populations within the Alberhill Substation survey area.

4.5.2 500-kV T/L Survey Area

Four sensitive plant species (Robinson's peppergrass, long-spined spineflower, Parry's spineflower, and Coulter's matilija poppy) were observed within the 500-kV T/L survey areas.

Eighteen separate populations of Robinson's peppergrass were observed within the 500-kV T/L study area. As in the case with the substation site, Robinson's peppergrass was generally observed on undisturbed, south-facing slopes within open spaces between shrubs. Soils at most locations supporting Robinson's peppergrass were rocky, and some of the observed populations were associated with rock outcrops and drainages.

Three separate populations of long-spined spineflower were observed within the 500-kV T/L study area. Populations of this species were generally observed within previously disturbed areas (i.e., scraped or graded areas) in clay-based soils within open areas or between shrubs.

Four separate populations of Parry's spineflower were observed within the 500-kV T/L study area. Populations of this species were observed within previously disturbed areas (i.e., formerly scraped area) in clay-based soils within open areas.

Three populations of Coulter's matilija poppy were observed along the extreme southeast edge of the southern C1 survey area and the western end of the existing 500-kV T/L. These populations are confined to the banks of riparian areas and on steep hillsides, upgradient of the existing utility access roads.

Appendix E-1 depicts the location of the observed sensitive plant populations within the 500-kV T/L survey area.

4.5.3 115-kV Sub T/L Survey Area

One sensitive plant species, Parry's spineflower, was observed within the 115-kV NEPSA.

Three separate populations of Parry's spineflower were observed in the 115-kV Sub T/L survey area. Populations of this species were generally located within open spaces between chamise in dense chaparral habitat. Soils within the 115-kV Sub T/L survey area are comprised of decomposed granite and compacted clay soils.

Appendix E-2 depicts the location of the observed sensitive plant populations within the 115-kV NEPSA.

4.6 Voucher Sensitive Plant Species

Six voucher specimens of sensitive plant species were collected during the 2011 sensitive plant surveys. Species collected include long-spined spineflower, small-flowered microseris, Parry's spineflower, and Robinson's peppergrass.

Table 4-2 summarizes the voucher specimens collected during the 2011 sensitive plant species surveys and provides the UCR herbarium collection number for reference.

Table 4-2. Summary of Voucher Sensitive Plant Species Collected

Species	Collector	UCR Herbarium Collection Number
long-spined spineflower	T.B. Salvato	5460
small-flowered microseris	T.B. Salvato	5461
Parry's spineflower	T.B. Salvato	5503
Robinson's peppergrass	T.B. Salvato	5500
Robinson's peppergrass	T.B. Salvato	5163
Robinson's peppergrass	T.B. Salvato	5502

5.0 Discussion

The geographic distributions of plant species are determined by many factors. While natural history, geographic barriers, and isolation all influence the distribution of species, the ultimate determinant of where a taxon can be found is its inherited tolerance to environmental factors (Kruckeburg and Rabinowitz 1985).

A majority of the previously observed (2009 and 2010 surveys) sensitive plant populations detected during the 2011 surveys were more robust and extensive. One notable species population exhibiting these qualities observed during the 2011 surveys was Robinson's peppergrass. This species was detected during the 2010 surveys; however, distribution was limited within the various Project study areas. During the 2011 surveys this species was detected in areas not previously inhabited or occurred in areas previously recorded but within larger populations.

Robinson's peppergrass, as well as some of the earlier blooming sensitive species, is a winter annual, which complete its life cycle during the winter and spring months. *Lepidium virginicum* typically germinates after the first rain of winter (Sanders, 2011). Seeds that matured before the plant died lie dormant in the ground until conditions are favorable for germination the following winter.

Several factors affect the germination of winter annuals. The most important of these are moisture availability and temperature. Different seeds have different temperature ranges within which they will germinate. While exact optimal germination temperatures for *Lepidium virginicum* are not known, other winter annual members of the same family, Brassicaceae, are known to germinate best when daytime temperatures range from 71.6° to 78.8°F (Kudoh et al. 2007). At temperatures beyond a certain range, germination will not occur (Meyer and Poljakoff-Mayber 1975). Temperatures varied little over the three growth seasons under comparison and were generally within the range of optimal temperature for germination. Alternatively, moisture availability, as measured by monthly precipitation, during the three growth seasons spanning July 2008 to the end of June 2011, was noted to have increased significantly; the total from the first growth season of 8 inches to the second growth season of 9.06 inches. This represents a 12 percent increase in precipitation. The most obvious change in precipitation is between the second growth season (2010 at 9.06 inches) and the third growth season (2011at 14.85 inches), which was an increase of 39 percent.

Optimal conditions, such as an increase of moisture availability during ideal germination temperatures, could account for the increased observations of Robinson's peppergrass during the 2011 surveys. These variables could also account for the survey team's detection of sensitive species (small-flowered microseris) not observed during previous surveys.

Consistently, long-spined spineflower, Parry's spineflower, and paniculate tarplant were often associated with generally barren areas caused by temporary impacts due to previous mechanical (e.g., graded area, abandoned road) or grazing-related disturbances. The occurrences of these three sensitive plant species within the disturbed open habitats could suggest that these species are unable to compete for light, which could explain their restriction to monospecific stands or open areas within the Project Area (McGraw and Levin 1998).

Also consistent with previous surveys, both Robinson's peppergrass and Coulter's matilija poppy were generally observed within undisturbed habitats, with Robinson's peppergrass preferring the open spaces between Riversidean Sage Scrub, and Coulter's matilija poppy associated with the banks of upland drainages. Undetermined environmental factors are responsible for these species growing within the observed areas as opposed to unoccupied similar habitat within the Project Area.

6.0 Potential Impacts

This section provides a general discussion of potential for indirect and direct impacts to sensitive plant populations observed during the 2011 sensitive plant survey. The potential for impact is based on a comparison of the relative location of sensitive plant populations recorded during the 2011 sensitive plant surveys and the proposed location of the Project components.

6.1 Alberhill Substation Survey Area

The multiple populations of Robinson's peppergrass detected during the 2011 sensitive plant survey within the Alberhill Substation survey area were generally found outside the area of anticipated direct impact. The area of potential direct impact from the proposed Alberhill Substation is generally developed and disturbed. Robinson's peppergrass is not expected to occur in developed and disturbed areas; therefore, impacts to this species are not anticipated.

Populations of long-spined spineflower, small-flowered microceris, and paniculate tarplant within the Alberhill Substation survey area are outside the area of anticipated direct impact. In addition, the area of anticipated direct impact associated with the proposed Alberhill Substation is generally developed; therefore, these sensitive plant species are not expected to occur within the area of anticipated direct impact.

6.2 500-kV T/L Survey Area

Populations of Robinson's peppergrass are likely to be threatened due to Project activities associated with the 500-kV Project components. Populations of this sensitive plant species that are subject to direct and indirect impacts are those observed adjacent to the locations for the following proposed Project components: towers VA-4, N3-3, C1-1, and C1-4; pull locations associated with the VA and C1 T/L; and access roads associated with towers C1-1, C1-3, SA-3, and SA-4.

Populations of long-spined spineflower are likely to be threatened due to Project activities associated with the proposed 500-kV Project components. Populations of this sensitive plant species that are subject to direct and indirect impacts are those observed adjacent to the locations for the following proposed Project components: the access road associated with C1-1 and tower C1-1.

Populations of Parry's spineflower are likely to be threatened due to Project activities associated with the proposed 500-kV Project components. Populations of this sensitive plant species that are subject to direct and indirect impacts are those observed adjacent to the locations for the following proposed Project components: pull locations associated with the C1 T/L.

Impacts to the single Coulter's matilija poppy population are not anticipated because it occurs outside the area of anticipated impact associated with the adjacent Tower C1-2 and the existing 500-kV T/L.

6.3 115-kV Sub T/L Survey Area

All four populations of Parry's spineflower occur south of Bundy Canyon Road, across the street from the area of anticipated direct impact. Because Project activities are not anticipated within the NEPSA identified in the 115-kV Sub T/L survey area, impacts to Parry's spineflower are not anticipated.

7.0 Recommendations

AECOM recommends that a management strategy aimed at the maintenance of open areas in the Riversidean Sage Scrub habitats and within upland drainage areas in the Project Area be developed to reduce impacts to the sensitive plant species populations that have the highest potential for impacts due to Project implementation.

The following discussion provides recommended avoidance and minimization measures based on potential impacts from construction-related activities on sensitive plant populations and native plant communities. The following measures are intended to avoid and minimize impacts to sensitive plant populations and native plant communities as much as feasible. These measures shall be reviewed by the regulatory agencies (i.e., USFWS, CDFG) prior to the start of construction.

7.1 Avoidance and Minimization Measures

The following avoidance and minimization measures are recommended to reduce impacts to sensitive plant species occurring within or adjacent to the proposed Project site during construction-related activities:

- A pre-construction survey should be conducted of all previously identified populations of sensitive plants located adjacent to construction-related activities (within a 100-foot buffer area) to identify areas for avoidance. The pre-construction survey shall be conducted in accordance with the guidelines issued by the regulatory agencies (USFWS and CDFG).

- Construction-related activities (grading, construction, ingress/egress, etc.) should be avoided within areas known to contain sensitive plant populations. Once identified, an Environmentally Sensitive Area (ESA) should be established around identified sensitive plant populations through installation of high-visibility exclusion fencing. The locations of all ESAs should be shown on construction drawings and should contain clear language which prohibits construction-related activities in these areas.

- Construction-related dust control measures should be enforced in order to reduce impacts to sensitive plant species from dust accumulation. Dust control measures should include, at a minimum, enforcement of a 20-mile-per-hour (mph) speed limit within the Project Area and applying water to keep fugitive dust to a minimum.

- Construction-related activities (e.g., construction vehicle parking, laydown areas, etc.) should be restricted as much as possible to already developed, disturbed, or low quality habitat areas (e.g., use of Nonnative Grassland areas).

7.2 Recommended Mitigation Measures

The avoidance and minimization measures described above are intended to reduce adverse impacts to sensitive plant populations and native plant communities; however, if adverse impacts are deemed unavoidable during construction-related activities, the following recommended measures are intended to mitigate for these direct and indirect impacts.

- A Habitat Restoration and Revegetation Plan (HRRP) should be prepared and implemented that includes restoration plans, enhancement/re-vegetation, and/or mitigation banking options and details for a 1- to 5-year monitoring and maintenance effort. Prior to the start of construction, all sensitive plant communities and sensitive plant populations should be documented; and areas subject to disturbance should be calculated in acres.

    - Loss of onsite native plant communities could be mitigated by allocating remaining onsite native plant communities as a conservation easement. In addition, these onsite conservation easements could be improved by removing debris and controlling public access and could include the implementation of a habitat management plan.

- A Weed Management Plan (WMP) for potential spread of nonnative invasive species (weeds) due to construction-related activities should be prepared and implemented. The WMP should include, at a minimum, weed control treatments and pre-construction and construction-related measures to control the introduction and spread of nonnative species in the Project Area.

    - A management policy for invasive exotic plants should be adopted and implemented as part of the WMP. The goals of the policy should include stopping further introductions of nonnative plant species into natural plant communities found onsite, implementing measures to control exotic plants in such a manner that native species and natural systems are not adversely impacted, and setting aside funding to adequately control the spread of invasive exotic species within less disturbed areas of the overall Project Area.

- A Worker Environmental Awareness Program (WEAP) should be implemented for all construction personnel by the Project biologist and biological monitor(s) prior to the start of construction-related activities. Training materials should include discussion of federal and state ESAs, the consequences of non-compliance with these regulations, and how to identify the sensitive plant species of concern. Participation in the WEAP would be a requirement prior to construction personnel being allowed to work in the field.

- A Project biologist and biological monitor(s) approved by SCE prior to the start of construction would oversee compliance with the HRRP, WMP, and WEAP training. The Project biologist and biological monitor(s) would have the authority to stop work that may result in the loss of sensitive plant species and/or non-compliance with measures contained in the HRRP and/or WMP.

- The biological monitor(s) would be onsite during construction-related activities that have the potential to impact known populations of sensitive plant species. The biological monitor(s) are required to be familiar with the sensitive plant species discussed in the HRRP, WMP, and WEAP training and would be able to perform pre-construction surveys to identify additional sensitive plant populations, if required.

    - Biological monitor(s) would be responsible for collecting data that would be submitted to SCE on a weekly basis for the duration of construction-related activities. Data collected would include, at a minimum, information on sensitive plant species observed and impacted, detection of nonnative species populations, and aspects of construction-related activities that may have impacts on sensitive plant populations.

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Appendix A
Photos

Appendix A-1
Reference Site Photographs
for Sensitive Plant Species



Photo 1. Munz's onion (*Allium munzii*) reference site located near the southeast corner of Campbell Ranch Road and Indian Truck Trail. Aspect southeast. April 6, 2011.



Photo 2. Munz's onion plants from reference site located near the corner of Campbell Ranch Road and Indian Truck Trail. April 6, 2011



Photo 3. Individual Palmer's grapplinghook (*Harpagonella palmeri*) from reference site located near the corner of Campbell Ranch Road and Indian Truck Trail. April 6, 2011



Photo 4. San Diego ambrosia (*Ambrosia pumila*) reference site located north of Nichols Road, approximately 0.5 mile west of the Nichols Road and Collier Road intersection. Aspect northeast. March 29, 2010.



Photo 5. Individual San Diego ambrosia from reference site located north of Nichols Road, approximately 0.5 mile west of the Nichols Road and Collier Road intersection. April 6, 2011.



Smooth tarplant (*Hemizonia* [*Centromadia*] *pungens* ssp. *laevis*) reference site located 150 feet southwest of the Diamond Drive and Campbell Street intersection. May 24, 2011.



Individual smooth tarplant (*Hemizonia* [*Centromadia*] *pungens* ssp. *laevis*) from reference site located 150 feet southwest of the Diamond Drive and Campbell Street intersection. May 24, 2011.



Peninsular spineflower (*Chorizanthe leptotheca*) reference site located in the Perris-Aguanga Basin of Temescal Canyon between Highway I-15 and Temescal Canyon Road, south of the west end of Lee Lake. May 24, 2011.



Individual peninsular spineflower (*Chorizanthe leptotheca*) from reference site located in the Perris-Aguanga Basin of Temescal Canyon between Highway I-15 and Temescal Canyon Road, south of the west end of Lee Lake. May 24, 2011.

Appendix A-2
Photographs from the Proposed Alberhill Substation Survey Area



Photo 1. Nonnative Grassland. Southeast portion of the proposed Alberhill Substation survey area. Aspect west. April 8, 2011.



Photo 2. Nonnative Grassland and Riversidean Sage Scrub. Southeast portion of the proposed Alberhill Substation survey area. Aspect northwest. April 8, 2011.



Photo 3. Nonnative Grassland and Riversidean Sage Scrub. Southeast portion of the proposed Alberhill Substation survey area. Aspect southwest. April 8, 2011.



Photo 4. Southern portion of the proposed Alberhill Substation, aspect west. April 8, 2011.



Photo 5. Southern portion of the proposed Alberhill Substation, aspect east. April 8, 2011

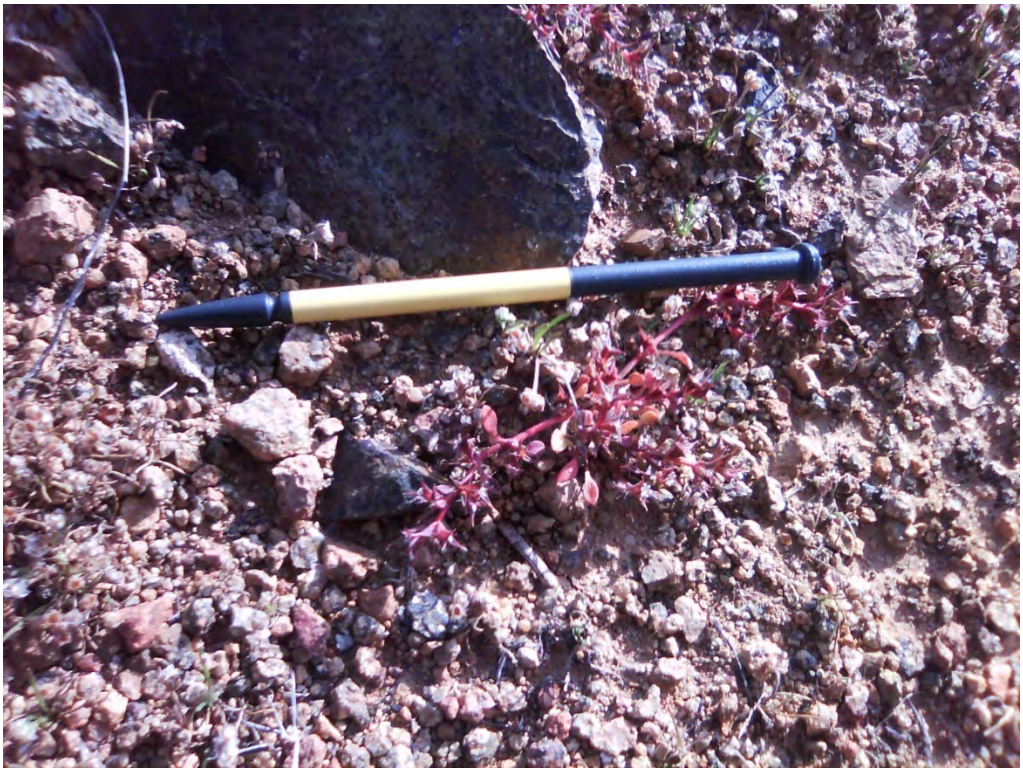


Photo 6. Individual long-spined spineflower from the central portion of the proposed Alberhill Substation survey area. April 13, 2011



Photo 7. Individual Robinson's peppergrass from the central portion of the proposed Alberhill Substation survey area. April 11, 2011.



Photo 8. Individual small-flowered microseris from the single population observed in the central portion of the proposed Alberhill Substation survey area. April 13, 2011.



Photo 9. Individual paniculate tarplant from the population observed in the southeast portion of the proposed Alberhill Substation survey area. June 6, 2011.

Appendix A-3
Photographs of Proposed 500-kV Transmission Line Survey Area



Photo 1. Proposed C1-3 Tower location, aspect southwest. May 31, 2011.



Photo 2. Proposed SA-3 Tower location, aspect northwest. May 31, 2011.



Photo 3. Proposed VA-3 Tower location, aspect southeast. May 31, 2011.



Photo 4. Proposed C1-4 Tower location, aspect west. May 31, 2011.



Photo 5. Proposed VA-4 Tower location, aspect east. June 2, 2011.



Photo 6. Proposed VA-5 Tower location, aspect northwest. April 18, 2011.



Photo 7. Pull location associated with the VA T/L, aspect northeast. April 18, 2011.



Photo 8. Pull location associated with the existing Serrano-Valley T/L, located east of the northern portion of the VA T/L, aspect east. April 18, 2011.



Photo 9. Proposed C1-1/VA-1 Tower location, aspect northeast. April 21, 2011.



Photo 10. Proposed C1-2/VA-2 Tower location aspect southeast. April 25, 2011.



Photo 11. Proposed N3-2/SA-2 Tower location, aspect south. April 25, 2011.



Photo 12. Proposed N3-4 Tower location (foreground) and pulling point location (background), aspect northeast. April 19, 2011.



Photo 13. Proposed N3-3 Tower location, aspect southwest. April 19, 2011.



Photo 14. Proposed SA-4 Tower location, aspect southwest. April 18, 2011.



Photo 15. Proposed SA-5 Tower location, aspect northeast. April 18, 2011.



Photo 16. Population of matilija poppy within the western extent of the existing Serrano-Valley T/L, aspect northwest. June 2, 2011.



Photo 17. Population of Parry's spineflower located north of the C1 T/L survey area and associated with the C1 pulling point. April 19, 2011.

Appendix A-4
Proposed 115-kV Transmission Line Survey Area



Photo 1. Chamise Chaparral within the proposed 115-kV Transmission Line survey area. From the eastern boundary, aspect west. April 26, 2011.



Photo 2. Population of Parry's spineflower located within the proposed 115-kV T/L survey area. April 26, 2011.

Appendix B
Plant Compendiums

Appendix B-1
Proposed Substation Survey Area and
Proposed 500-kV Transmission Line Survey Area
Plant Compendium

Family Name	Full Scientific Name with Authors	Local Habit
Pteridaceae		
	Cheilanthes newberryi (D.C. Eat.) Domin.	perennial
	Pellaea andromedifolia (Kaulf.) Fée	perennial
	Pellaea mucronata (D.C. Eat.) D.C. Eat.	perennial
	Pityrogramma triangularis (Kaulfuss) Maxon	perennial
Selaginellaceae		
	Selaginella bigelovii Underw.	perennial
Cupressaceae		
	Juniperus californica Carr.	shrub
Pinaceae		
	Pinus canariensis C. Sm.*	tree (cultivated)
	Pinus halepensis Mill.*	tree (cultivated)
	Pinus pinea L.*	tree (cultivated)
Adoxaceae		
	Sambucus mexicana Presl.	shrub/tree
Amaranthaceae		
	Amaranthus albus L.*	annual
	Amaranthus blitoides S. Wats.	annual
Anacardiaceae		
	Rhus laurina Nutt. (=*Malosma laurina*)	shrub
	Schinus molle L.*	tree (cultivated)
	Toxicodendron diversilobum (Torr. & Gray) Greene	shrub/liana
Apiaceae		
	Apiastrum angustifolium Nutt.	annual
	Bowlesia incana Ruiz & Pavon	annual
	Daucus pusillus Michx.	annual
	Lomatium dasycarpum (Torr. & Gray) Coult. & Rose	perennial
	Sanicula arguta Greene ex C. & R.	perennial
	Sanicula bipinnatifida Dougl. ex Hook.	perennial
Asclepiadaceae		
	Sarcostemma cynanchoides Dcne.	perennial vine
Asteraceae		
	Acourtia microcephala DC.	perennial
	Ambrosia acanthicarpa Hook.	annual
	Ambrosia psilostachya DC.	perennial
	Artemisia californica Less.	shrub
	Artemisia douglasiana Bess.	perennial
	Artemisia dracunculus L.	perennial
	Baccharis salicifolia (Ruiz & Pavón) Pers.	shrub
	Bebbia juncea (Benth.) Greene var. *aspera* Greene	shrub
	Brickellia desertorum Coville	shrub
	Centaurea melitensis L.*	annual
	Chaenactis artemisiifolia (Harv. & Gray ex Gray) Gray	annual
	Chaenactis glabriuscula DC.	annual
	Cirsium vulgare (Savi) Ten.	annual
	Conyza canadensis (L.) Cronq.	annual
	Cotula australis (Sieber) Hook. f.*	annual
	Encelia farinosa Gray ex Torr. var. *farinosa*	shrub
	Ericameria palmeri (Gray) Hall var. *pachylepis* (Hall) Nesom	shrub
	Erigeron foliosus Nutt.	perennial

Family Name	Full Scientific Name with Authors	Local Habit
	Eriophyllum confertiflorum (DC.) Gray	subshrub
	Filago californica Nutt.	annual
	Filago gallica L.*	annual
	Gnaphalium bicolor Biol.	perennial
	Gnaphalium californicum DC.	biennial
	Gutierrezia californica (DC.) T. & G.	subshrub
	Hedypnois cretica (L.) Dum.-Cours.*	annual
	Helianthus annuus L.*	annual
	Helianthus gracilentus Gray	perennial
	Hemizonia fasciculata (DC.) Torr. & Gray	annual
	Hemizonia kelloggii Greene	annual
	Hemizonia paniculata Gray	annual
	Heterotheca grandiflora Nutt.	biennial
	Hypochaeris glabra L.*	annual
	Lactuca serriola L.*	annual
	Lasthenia coronaria (Nutt.) Ornd.	annual
	Lasthenia gracilis (DC.) Greene	annual
	Layia platyglossa (Fisch. & Mey.) Gray	annual
	Lessingia filaginifolia (H. & A.) M.A. Lane	perennial
	Malacothrix saxatilis (Nutt.) T. & G.	perennial
	Matricaria matricarioides (Less.) Porter (=*Chamomilla suaveolens*)*	annual
	Microseris douglasii ssp. platycarpha (Gray) Chamber	annual
	Microseris heterocarpa (Nutt.) Chamb.	annual
	Microseris lindleyi (DC.) Gray (=*Uropappus lindleyi*)	annual
	Rafinesquia californica Nutt.	annual
	Senecio vulgaris L.*	annual
	Silybum marianum (L.) Gaertn.*	biennial
	Solidago californica Nutt.	perennial
	Sonchus asper (L.) Hill*	annual
	Sonchus oleraceus L.*	annual
	Stephanomeria exigua Nutt. ssp. *deanei* (J.F. Macbr.) Gottlieb	annual
	Stephanomeria virgata Benth. ?	annual
	Stylocline gnaphaloides Nutt.	annual
	Tetradymia comosa Gray	shrub
	Xanthium strumarium L.	annual
Bignoniaceae		
	Catalpa spp.*	tree (cultivated)
Boraginaceae		
	Amsinckia intermedia Fisch. & Mey. (=*Amsinckia menziesii intermedia*)	annual
	Amsinckia retrorsa Suksd. (=*Amsinkia menziesii menziesii*, in Jeps. Man.)	annual
	Amsinckia tessellata Gray	annual
	Cryptantha corollata (I.M. Johnston) I.M. Johnston	annual
	Cryptantha intermedia (Gray) Greene	annual
	Cryptantha microstachys (Greene ex Gray) Greene	annual
	Pectocarya linearis (R. & P.) DC.	annual
	Pectocarya penicillata (H. & A.) A. DC.	annual
	Pectocarya recurvata Jtn.	annual
	Plagiobothrys canescens Benth.	annual
	Plagiobothrys collinus (Phil.) Jtn.	annual

Family Name	Full Scientific Name with Authors	Local Habit
Brassicaceae		
	Brassica geniculata (Desf.) Ball (=*Hirschfeldia incana*)*	annual/perennial
	Brassica rapa L.*	annual
	Brassica tournefortii Gouan.*	annual
	Capsella bursa-pastoris (L.) Medik.*	annual
	Coronopus didymus (L.) Sm.*	annual
	Lepidium nitidum Nutt.	annual
	Lepidium virginicum L. var. *robinsonii* (Thell.) C. Hitchc.	annual
	Rorippa nasturtium-aquaticum (L.) Hayek*	perennial
	Sisymbrium irio L.*	annual
	Sisymbrium orientale L.*	annual
	Thysanocarpus curvipes Hook.	annual
	Thysanocarpus laciniatus Nutt.	annual
Cactaceae		
	Cylindropuntia californica (Torr. & A. Gray) F.M. Knuth (=*Opuntia parryi*)	succulent shrub
	Opuntia littoralis (Engelm.) Cockerell	succulent shrub
Caryophyllaceae		
	Cerastium glomeratum Thuill.*	annual
	Herniaria hirsuta ssp. cinerea (DC.) Coutinho	annual
	Loeflingia squarrosa Nutt.	annual
	Silene antirrhina L.	annual
	Spergularia rubra (L.) J. Presl. & C. Presl.*	annual
	Stellaria media (L.) Villars*	annual
Chenopodiaceae		
	Atriplex suberecta I. Verd.*	annual
	Chenopodium berlandieri Moq.	annual
	Chenopodium murale L.*	perennial
	Salsola tragus L.*	annual
Convolvulaceae		
	Calystegia macrostegia (Greene) Brummitt ssp. *arida* (Greene) Brummitt	perennial vine
	Cuscuta californica Hook. & Arn.	annual vine
Crassulaceae		
	Crassula connata (R. & P.) Berger	annual
	Dudleya lanceolata (Nutt.) Britt. & Rose	perennial
	Dudleya pulverulenta (Nutt.) Britt. & Rose	succulent perennial
Cuscutaceae		
	Cucurbita foetidissima Kunth	perennial vine
	Cucurbita palmata S. Wats.	perennial vine
	Marah macrocarpus (Greene) Greene	perennial vine
Euphorbiaceae		
	Croton californicus Muell.-Arg.	perennial
	Croton setiger Hook. (=*Eremocarpus s*.)	annual
	Euphorbia albomarginata T. & G. (=*Chamaesyce a*.)	perennial
	Euphorbia polycarpa Benth. (=*Chamaesyce p*.)	perennial
	Ricinus communis L.*	shrub (weak)
Fabaceae		
	Astragalus gambelianus Sheldon	annual
	Lotus hamatus Greene	annual
	Lotus heermannii (Dur. & Hilg.) Greene	perennial

Family Name	Full Scientific Name with Authors	Local Habit
	Lotus humistratus Greene	annual
	Lotus salsuginosus Greene	annual
	Lotus scoparius (Nutt.) Ottley var. *brevialatus* Ottley	subshrub
	Lotus strigosus (Nutt.) Greene	annual
	Lupinus bicolor Lindl.	annual
	Lupinus concinnus Agardh.	annual
	Lupinus excubitus M.E. Jones	perennial
	Lupinus hirsutissimus Benth.	annual
	Lupinus sparsiflorus Benth.	annual
	Lupinus truncatus H. & A.	annual
	Medicago polymorpha L.*	annual
	Melilotus albus Medikus *	annual
	Melilotus indicus (L.) All.*	annual
	Parkinsonia aculeata L.*	tree (cultivated)
	Trifolium obtusiflorum Hook. f.	annual
	Trifolium willdenovii Spreng.	annual
Fagaceae		
	Quercus agrifolia Née	tree
	Quercus berberidifolia Liebm.	shrub
	Quercus virginiana P. Mill.*	tree (cultivated)
Geraniaceae		
	Erodium botrys (Cav.) Bertol.*	annual
	Erodium cicutarium (L.) L'Her. ex Ait.*	annual
	Erodium moschatum (L.) L'Her. ex Ait.*	annual
Hydrophyllaceae	*Emmenanthe penduliflora* Benth.	annual
	Eucrypta chrysanthemifolia (Benth.) Greene	annual
	Nemophila menziesii H. & A.	annual
	Phacelia campanularia Gray	annual
	Phacelia cicutaria Greene var. *hispida* (Gray) J.T. Howell	annual
	Phacelia distans Benth.	annual
	Phacelia minor (Harv.) Thell.	annual
	Pholistoma auritum (Lindl.) Lilja	annual
Juglandaceae	*Juglans hindsii* X regia*	tree (cultivated)
	Juglans regia L.*	tree (cultivated)
Lamiaceae	*Marrubium vulgare* L.*	perennial
	Salvia apiana Jeps.	shrub
	Salvia columbariae Benth.	annual
	Salvia mellifera Greene	shrub
	Stachys ajugoides Benth. ?	perennial
	Trichostema lanceolatum Benth.	annual
Malvaceae	*Malacothamnus fasciculatus* (Nutt.) Greene	shrub
	Malva parviflora L.*	annual
Moraceae	*Ficus carica* L.*	shrub/tree
	Morus alba L.*	tree (cultivated)
Myrtaceae	*Eucalyptus camaldulensis* Dehnh.*	tree (cultivated)
	Eucalyptus cladocalyx F. Muell.*	tree (cultivated)
	Eucalyptus populnea F. Muell.*	tree (cultivated)
Nyctaginaceae		
	Mirabilis laevis (Benth.) Curran	perennial

Family Name	Full Scientific Name with Authors	Local Habit
Oleaceae		
	Olea europaea L.*	tree (cultivated)
Onagraceae		
	Camissonia bistorta (Nutt. ex T. & G.) Raven	annual
	Camissonia californica (Nutt. ex T. & G.) Raven	annual
	Camissonia ignota (Jepson) Raven	annual
	Clarkia epilobioides (Nutt. ex T. & G.) Nels. & Macbr.	annual
	Clarkia purpurea (Curt.) A. Nels. & Macbr.	annual
	Epilobium ciliatum Raf.	annual/perennial
Papaveraceae		
	Eschscholzia californica Cham.	perennial/annual
	Platystemon californicus Benth.	annual
	Romneya coulteri Harv.	perennial
Plantaginaceae		
	Plantago erecta Morris	annual
Platanaceae		
	Platanus racemosa Nutt.	tree
Polemoniaceae		
	Allophyllum spp.	annual
	*Eriastrum sapphirinum (*Eastw.) Mason	annual
	Gilia angelensis V. Grant	annual
	Linanthus parviflorus (Benth.) Greene	annual
Polygonaceae		
	Chorizanthe coriacea Goodm.	annual
	Chorizanthe parryi S. Wats. var. *parryi*	annual
	Chorizanthe polygonoides var. *longispina* (Goodman) Munz	annual
	Eriogonum elongatum Benth.	perennial
	Eriogonum fasciculatum Benth. var. *foliolosum* (Nutt.) S. Stokes ex Abrams	shrub
	Eriogonum fasciculatum Benth. var. *polifolium* (A. DC.) T. & G.	shrub
	Eriogonum gracile Benth.	annual
	Polygonum aviculare L.*	annual
	Pterostegia drymarioides F. & M.	annual
	Rumex crispus L.*	perennial
	Rumex hymenosepalus Torr.	perennial
	Rumex salicifolius Weinm.	perennial
Portulacaceae		
	Calandrinia ciliata (R. & P.) DC.	annual
	Claytonia parviflora Dougl. ex Hook.	annual
	Claytonia perfoliata Donn ex Willd.	annual
Proteaceae		
	Grevillea robusta A. Cunningham ex R. Br.*	tree (cultivated)
Punicaceae		
	Punica granatum L.*	shrub
Ranunculaceae		
	Clematis pauciflora Nutt.	liana
	Delphinium parryi Gray	perennial

Family Name	Full Scientific Name with Authors	Local Habit
Rhamnaceae		
	Ceanothus crassifolius Torr.	shrub
	Rhamnus crocea Nutt.	shrub
	Ziziphus jujuba (L.) Lam.*	tree (persisting from cultivation)
Rosaceae		
	Adenostoma fasciculatum H. & A.	shrub
	Cercocarpus betuloides Torr. & A. Gray	shrub
	Prunus ilicifolia (Nutt.) Walp.	shrub
Rubiaceae		
	Galium angustifolium Nutt. ex Gray	perennial
	Galium aparine L.*	annual
Salicaceae		
	Populus fremontii S. Wats.	tree
	Salix gooddingii Ball.	tree
	Salix laevigata Bebb	tree
	Salix lasiolepis Benth.	shrub
Scrophulariaceae		
	Antirrhinum coulterianum Benth.	annual
	Antirrhinum nuttallianum Benth.	perennial
	Castilleja affinis H. & A.	perennial
	Castilleja exserta (Heller) Chuang & Heckard	annual
	Collinsia concolor Greene	annual
	Keckiella antirrhinoides (Benth.) Straw	shrub
	Mimulus aurantiacus Curtis var. *puniceus* (Nutt.) D. Thompson	shrub
	Mimulus brevipes Benth.	annual
	Mimulus cardinalis Benth.	perennial
	Mimulus guttatus DC.	perennial
	Penstemon spectabilis Thurb. ex Gray	perennial
Solanaceae		
	Datura wrightii Regel	perennial
	Lycium andersonii Gray	shrub
	Nicotiana glauca Grah.*	shrub
	Nicotiana quadrivalvis Pursh	annual
	Solanum douglasii Dunal	perennial
	Solanum esculentum L.*	annual/perennial
	Solanum umbelliferum Eschsch.	perennial
Tamaricaceae		
	Tamarix ramosissima Ledeb.*	shrub
Urticaceae		
	Parietaria hespera B.D. Hinton	annual
	Urtica dioica L.	perennial
	Urtica urens L.*	annual
Agavaceae		
	Yucca whipplei Torr.	perennial
Arecaceae		
	Washingtonia robusta H.A. Wendl.*	tree (cultivated)
Cyperaceae		
	Cyperus eragrostis Lam.	perennial
	Scirpus acutus Bigel. ?	perennial

Family Name	Full Scientific Name with Authors	Local Habit
Juncaceae		
	Juncus bufonius L.	annual
	Juncus macrophyllus Cov. ?	perennial
	Juncus textilis Buch.	perennial
	Juncus xiphioides E. Meyer	perennial
Liliaceae		
	Allium haematochiton S. Wats.	perennial
	Allium peninsulare Lemmon ex Greene var. peninsulare	perennial
	Bloomeria crocea (Torr.) Coville	perennial
	Calochortus splendens Dougl. ex Benth.	perennial
	Calochortus weedii Wood var. *weedii*	perennial
	Dichelostemma capitatum (Benth.) Alph. Wood	perennial
	Muilla maritima (Torr.) S. Wats.	perennial
Poaceae		
	Arundo donax L.*	perennial
	Avena barbata Brot.*	annual
	Avena fatua L.*	annual
	Avena sativa L.*	annual
	Bromus diandrus Roth*	annual
	Bromus hordeaceus L.*	annual
	Bromus rubens L. (=*Bromus madritensis rubens*)*	annual
	Bromus tectorum L.*	annual
	Bromus trinii Desv.	annual
	Cynodon dactylon (L.) Pers.*	perennial
	Distichlis spicata (L.) Greene	perennial
	Elymus condensatus Presl (=*Leymus condensatus*)	perennial
	Elymus glaucus Buckl.	perennial
	Festuca microstachys Nutt. var. *pauciflora* Scribn. ex Beal	annual
	Festuca myuros L.*	annual
	Festuca octoflora Walt.	annual
	Hordeum murinum L.*	annual
	Lamarckia aurea (L.) Moench*	annual
	Melica frutescens Scribn.	perennial
	Melica frutescens X *imperfecta*	perennial
	Melica imperfecta Trin.	perennial
	Muhlenbergia microsperma (DC.) Kunth.	annual
	Phalaris minor Retz.*	annual
	Poa annua L.*	annual
	Poa secunda Presl.	perennial
	Polypogon monspeliensis (L.) Desf.*	annual
	Schismus barbatus (L.) Thell.*	annual
	Stipa lepida Hitchc. (=*Nassella lepida*)	perennial
	Stipa pulchra Hitchc. (=*Nassella pulchra*)	perennial
Typhaceae		
	Typha spp.	perennial
*=nonnative species		

Appendix B-2
Proposed 115-kV Transmission Line Survey Area
Plant Compendium

Family Name	Full Scientific Name with Authors	Local habit
Asteraceae		
	Centaurea melitensis L.*	annual
	Erigeron foliosus Nutt.	perennial
	Eriophyllum confertiflorum (DC.) Gray	subshrub
	Eriophyllum multicaule (DC.) Gray	annual
	Filago californica Nutt.	annual
	Filago gallica L.*	annual
	Gnaphalium bicolor Biol.	perennial
	Gnaphalium californicum DC.	biennial
	Gnaphalium stramineum Kunth.	annual
	Helianthus gracilentus Gray	perennial
	Hemizonia paniculata Gray	annual
	Hypochaeris glabra L.*	annual
	Lasthenia coronaria (Nutt.) Ornd.	annual
	Lasthenia gracilis (DC.) Greene (=*L. californica*)	annual
	Lessingia filaginifolia (H. & A.) M.A. Lane	perennial
	Microseris lindleyi (DC.) Gray (=*Uropappus l.)*	annual
	Rafinesquia californica Nutt.	annual
	Senecio vulgaris L.*	annual
	Stephanomeria exigua Nutt.	annual (all either seedlings or old skeletons)
	Stylocline gnaphaloides Nutt.	annual
Boraginaceae		
	Amsinckia intermedia Fisch. & Mey.	annual
	Amsinckia retrorsa Suksd. ?	annual
	Cryptantha corollata (I.M. Johnston) I.M. Johnston ?	annual
	Cryptantha intermedia (Gray) Greene	annual
	Cryptantha microstachys (Greene ex Gray) Greene	annual
	Pectocarya linearis (R. & P.) DC.	annual
	Pectocarya penicillata (H. & A.) A. DC.	annual
	Plagiobothrys canescens Benth.	annual
	Plagiobothrys collinus (Phil.) Jtn.	annual
Brassicaceae		
	Brassica geniculata (Desf.) Ball (=*Hirschfeldia incana*)*	annual/perennial
	Sisymbrium altissimum L.*	annual
	Thysanocarpus curvipes Hook.	annual
	Tropidocarpum gracile Hook.	annual
Campanulaceae		
	Nemacladus ramosissimus Nutt.	annual
Caryophyllaceae		
	Loeflingia squarrosa Nutt.	annual
Crassulaceae		
	Crassula connata (R. & P.) Berger	annual
Cuscutaceae		
	Marah macrocarpus (Greene) Greene	perennial vine

Fabaceae		
	Lotus scoparius (Nutt.) Ottley ssp. *brevialatus* (Ottley) Munz	subshrub
Geraniaceae		
	Erodium botrys (Cav.) Bertol. ?*	annual
	Erodium cicutarium (L.) L'Her. ex Ait.*	annual
Hydrophyllaceae	*Eucrypta chrysanthemifolia* (Benth.) Greene	annual
	Phacelia cicutaria Greene var. *hispida* (Gray) J.T. Howell	annual
Lamiaceae		
	Salvia columbariae Benth.	annual
	Salvia mellifera Greene	shrub
Onagraceae		
	Camissonia hirtella (Greene) Raven	annual
Polemoniaceae		
	Eriastrum sapphirinum (Eastw.) Mason	annual
	Gilia angelensis V. Grant	annual
	Navarretia atractyloides (Benth.) H. & A.	annual
Polygonaceae	*Chorizanthe fimbriata* Nutt.	annual
	Chorizanthe parryi S. Wats. var. *parryi*	annual (one colony of c. 500)
	Eriogonum fasciculatum Benth. ssp. *foliolosum* (Nutt.) Abrams	shrub
	Eriogonum gracile Benth.	annual
	Pterostegia drymarioides F. & M.	annual
Portulaceae		
	Claytonia parviflora Dougl. ex Hook.	annual
Rhamnaceae		
	Ceanothus crassifolius Torr.	shrub
Rosaceae		
	Adenostoma fasciculatum H. & A.	shrub
Liliaceae		
	Dichelostemma capitatum (Benth.) Alph. Wood	perennial
Poaceae	*Avena barbata* Brot.*	annual
	Avena fatua L.*	annual
	Bromus diandrus Roth*	annual
	Bromus hordeaceus L.*	annual
	Bromus madritensis L. ssp. *rubens* (L.) Husnot*	annual
	Festuca microstachys Nutt. var. *pauciflora* Scribn. ex Beal (=*Vulpia m*.)	annual
	Festuca myuros L.* (=*Vulpia m*.)	annual
	Festuca octoflora Walt. (=*Vulpia o*.)	annual
	Schismus barbatus (L.) Thell.*	annual
* = nonnative species		

Appendix C
Summary of Survey Hours

Table C-1. March-April 2011 Sensitive Plant Survey, Summary of Survey Hours (Proposed Alberhill Substation Survey Area and Proposed 500-kV Transmission Line Survey Area)

Date	Surveyors	Time
4/6/2011	Teresa Salvato Dave Charlton Matt Mallé	0700-1730 hrs
4/7/2011	Teresa Salvato Dave Charlton Matt Mallé	1500-1900 hrs
4/8/2011	Matt Mallé	0700-1500 hrs
4/11/2011	Teresa Salvato Matt Mallé	0700-1500 hrs
4/12/2011	Teresa Salvato Matt Mallé	0700-15000 hrs
4/13/2011	Teresa Salvato Matt Mallé	0630-1130 hrs
4/15/2011	Teresa Salvato Matt Mallé	0630-1400 hrs
4/18/2011	Teresa Salvato Matt Mallé	0630-1530 hrs
4/19/2011	Teresa Salvato Matt Mallé	0630-1530 hrs
4/20/2011	Teresa Salvato Matt Mallé	0630-1500 hrs
4/21/2011	Teresa Salvato Matt Mallé	0630-1530 hrs
4/22/2011	Teresa Salvato Matt Mallé	0630-1430 hrs
4/25/2011	Teresa Salvato Matt Mallé	0630-1200

Table C-2. March-April 2011 Sensitive Plant Survey, Summary of Survey Hours (Proposed 115-kV Transmission Line Survey Area)

Date	Surveyors	Time
4/26/2011	Teresa Salvato Matt Mallé	0630-0930 hrs

Table C-3. May-June 2011 Sensitive Plant Survey, Summary of Survey Hours (Proposed Alberhill Substation Survey Area and Proposed 500-kV Transmission Line Survey Area)

Date	Surveyors	Time
5/24/2011	Teresa Salvato Matt Mallé	0630-1430 hrs
5/26/2011	Teresa Salvato Matt Mallé	0630-1430 hrs
5/27/2011	Teresa Salvato Matt Mallé	0630-1430 hrs
5/31/2011	Teresa Salvato Matt Mallé	0630-1430 hrs
6/2/2011	Teresa Salvato Matt Mallé	0630-1430 hrs
6/3/2011	Teresa Salvato Matt Mallé	0630-1430 hrs
6/6/2011	Matt Mallé	0630-1430 hrs

Table C-4. May-June 2011 Sensitive Plant Survey, Summary of Survey Hours (Proposed 115-kV Transmission Line Survey Area)

Date	Surveyors	Time
6/7/2011	Teresa Salvato Matt Mallé	1000-1200 hrs

Appendix D
Sensitive Plant Species Tables

Appendix D-1
Target Sensitive Plant Species
Blooming Between March and April

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Allium munzii Munz's onion	FE/ST CNPS 1B.1	X	X	X	March-May	RSS/NNG/MC/ CC	X		Occurs in clay soils (within Western Riverside County unit Bosanko clay soils and Las Posas gravelly loam) within mesic sites in grassy openings within scrublands or woodlands. 297-1070 meters.
Ambrosia pumila San Diego ambrosia	FE CNPS 1B.1		X		April-Oct	RSS/MC/NNC/ CC/AS	X		Occurs in upland areas on clay slopes or dry margins of vernal pools. Often associated with open, gently-sloped grasslands, and generally found in alkaline soils. 20-415 meters.
Caulanthus simulans Payson's jewel flower	CNPS 4.2	X	X	X	Feb-June	RSS/MC/CC			Occurs in frequently burned areas or in other disturbed sites such as streambeds within chaparral and coastal scrub habitats.
Chorizanthe parryi var. *parryi* Parry's spineflower	CNPS 1B.1	X	X	X	April-June	RSS/NNG/CC/ MC			Occurs in coastal sage scrub and chaparral. Found on dry slopes and flats within dry sandy soils. 275-1220 meters.
Chorizanthe polygonoides var. *longspina* long-spined spineflower	CNPS 1B.2	X	X	X	April-July	RSS/NNG/MC/ CC			Occurs in clay soils within openings in chaparral, coastal scrub, meadows, valley/foothill grasslands. 30-1530 meters.
Convolvulus simulans small-flowered morning glory	CNPS 4.2		X	X	March-July	CC/MC/RSS/ NNG			Occurs within chaparral, sage scrub, and valley/foothill grassland habitat. Has an affinity to serpentine soil and associated seeps. 30-700 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Deinandra paniculata paniculate tarplant	CNPS 4.2		X	X	April-Nov	RSS/NNG			Occurs within dry foothills and mesas in sage scrub valley/foothill grasslands and non-native grasslands. Often associated with disturbed sites within these habitat types.
Dodecahema leptoceras slender-horned spineflower	FE/SE CNPS 1B.1		X	X	April-June	RSS/MC/CC/AS	X		Occurs within chaparral, sage scrub habitats. Flood deposited terraces and washes. Associations include *Encelia*, *Dalea*, *Lepidospartum*. 200-760 meters.
Dudleya multicaulis many-stemmed dudleya	CNPS 1B.2	X	X	X	April-July	RSS/NNG/MC/ CC	X		Occurs in heavy clay soils or grassy slopes in barrens, rocky places, and ridgelines chaparral, sage scrub and, valley/foothill grasslands. 15-790 meters.
Erodium (California) macrophyllum round-leaved filaree	CNPS 1B.1	X	X	X	March-May	NNG		X	Occurs in grasslands with relatively low cover of annual grasses on friable/clay soils. 15-1200 meters.
Harpagonella palmeri Palmer's grapplinghook	CNPS 4.2	X	X	X	March-May	RSS/NNG/MC/ CC			Occurs within openings in chaparral, sage scrub, and valley/foothill grassland habitats. Often associated with clay soils. 20-955 meters.
Lepidium virginicum var. *robinsonii* Robinson's pepper grass	CNPS 1B.2	X	X	X	Jan-July	RSS/MC/CC			Occurs within chaparral, coastal scrub. Often associated with dry soils. 1-885 meters.
Microseris douglasii var. *platycarpha*	CNPS 4.2		X	X	March-May	RSS/NNG			Occurs within cismontane woodland, sage scrub, valley and foothill grassland

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
small-flowered microseris									and vernal pool habitats. Often associated with clay soils. 15-1070 meters.
Romneya coulteri Coulter's matilija poppy	CNPS 4.2		X	X	March-July	CC/MC/RSS			Occurs within chaparral and sage scrub habitats. Often found within these plant communities after burns.
Sphaerocarpos drewei bottle liverwort	CNPS 1B.1	X	X	X	-	CC/MC/RSS			Occurs within openings on soil in chaparral and sage scrub habitats. 90-600 meters.

Definitions:

Plant Communities:

AS	Alluvial Scrub
CC	Chamise Chaparral
MC	Mixed Chaparral
NNG	Nonnative Grassland
RSS	Riversidean Sage Scrub

Status Codes:

FE	Federally Endangered
FT	Federally Threatened
SE	State Endangered
ST	State Threatened

CNPS Status Codes:

List 1A	Presumed extinct in California
List 2	Presumed extinct in California, but more common elsewhere
List 3	We need more information about this plant
List 4	Limited distribution (watch list)
.1	Seriously endangered in CA (over 80% of occurrences threatened/high degree and immediacy of threat)
.2	Fairly endangered in CA (20-80% occurrences threatened)
.3	Not very endangered in CA (<20% of occurrences threatened or no current threats known)

Appendix D-2
Target Sensitive Plant Species
Blooming Between March and June

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Calochortus plummerae Plummer's mariposa lily	FSS CNPS 1B.2	X	X	X	May-July	RSS/NNG/CC/MC			Occurs on rocky or sandy sites, usually of granitic or alluvial material within sage scrub, Chaparral, valley foothill grassland, cismontane woodland and lower montane coniferous forest. Can be very common after a fire. 100-1700 meters.
Calochortus weedii var. *intermedius* intermediate mariposa lily	CNPS 1B.2	X	X	X	May-July	RSS/NNG/MC/CC			Occurs on rocky or sandy sites within sage scrub, chaparral, and valley/foothill grassland habitats. 105-855 meters.
Centromadia pungens ssp. *laevis* smooth tarplant	CNPS 1B.1		X		April-Sept	CAM/NNG/RUE/ SWS/MS/RS/TS/ CWR/SSR		X	Occurs in alkali meadow or alkali scrub within valley and foothill grasslands, meadows, playas or riparian woodland. 0-480 meters.
Chorizanthe leptotheca peninsular spineflower	CNPS 4.2		X	X	May-Aug	CC/MC/RSS			Occurs within chaparral, coastal scrub, and lower montane coniferous forest. 300-1900 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Pseudognaphalium leucocephalum white rabbit-tobacco	CNPS 2.2		X	X	July-Dec	CC/MC/RSS/ SWS/MS/RS/TS/CWR/SSR			Occurs within chaparral, cismontane woodland, sage scrub, and riparian woodlands. Usually associated with sandy or gravelly substrates. 0-2100 meters.
Scutellaria bolanderi ssp. *austromontana* Southern Mountain skullcap	CNPS 1B.2			X	June-Aug	CC/MC/CLOWR/CLOWU			Occurs within chaparral, cismontane woodland, lower montane coniferous forests. Found in gravelly soils on streambeds or in mesic sites in oak or pine woodland. 425-2000 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Symphyotrichum defoliatum San Bernardino aster	CNPS 1B.2	X			July-Nov	RSS/VFM/CAM/ NNG/SWS/MS/ RS/TS/CWR/SSR			Occurs within meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, grassland habitat. Found in vernally mesic grasslands or near ditches, streams, springs, and disturbed areas within 2-2040 meters.

Definitions:

Plant Communities:

CAM	Cismontane Alkali Marsh
CC	Chamise Chaparral
CLOWR	Coast Live-Oak Woodland-Riparian
CLOWU	Coast Live-Oak Woodland-Upland
CWR	Southern Cottonwood/Willow Riparian Forest
MC	Mixed Chaparral
MS	Mulefat Scrub
NNG	Nonnative Grassland
RS	Riparian Scrub
RSS	Riversidean Sage Scrub
RUE	Rural/Urban/Exotic
SSR	Southern Sycamore Riparian Woodland
SWS	Southern Willow Scrub
TS	Tamarisk Scrub
VFM	Valley Freshwater Marsh

CNPS Status Codes:

List 1A	Presumed extinct in California
List 2	Presumed extinct in California, but more common elsewhere
List 3	We need more information about this plant
List 4	Limited distribution (watch list)
.1	Seriously endangered in CA (over 80% of occurrences threatened/high degree and immediacy of threat)
.2	Fairly endangered in CA (20-80% occurrences threatened)
.3	Not very endangered in CA (<20% of occurrences threatened or no current threats known)

Status Codes:

FE	Federally Endangered
FT	Federally Threatened
SE	State Endangered
ST	State Threatened

Appendix D-3
Plant Species with Low to No Potential for Occurrence

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Abronia villosa var. *aurita* chaparral sand-verbena	CNPS 1B.1		X	X	Jan-Sept	AS/CC/RSS			Occurs within sandy soils and is associated with washes within chaparral and sage scrub plant communities. 80-1600 meters.
Allium marvinii Yucaipa onion	FSS CNPS 1B.1		X	X	April-May	CC/MC	X		Occurs in openings within chaparral plant communities. Often associated with clay soils. Local endemic to the Beaumont and Yucaipa area. 760-1065 meters.
Arabis johnstonii Johnston's rock cress	FSS CNPS 1B.2				Feb-June	MC/CC	X		Occurs within chaparral and lower montane coniferous forest. Often associated within eroded clay soils. 1350-2150 meters.
Arctostaphylos rainbowensis rainbow manzanita	CNPS 1B.1				Dec-March	MC/CC			Most often occurs in Gabbro soils within chaparral in Riverside and San Diego counties. 225-670 meters.
Astragalus pachypus var. jaegeri Jaeger's milkvetch	CNPS 1B.1		X	X	Dec-June	AS/CC/MC/RSS/ NNG			Occurs in a variety of habitats including chaparral, cismontane woodland, coastal scrub and valley/foothill grassland habitats. Occurs locally within the "badlands" south of Beaumont and Potrero Canyon area. 365-915 meters.
Atriplex coronata var. notatior San Jacinto valley crownscale	FE CNPS 1B.1		X		April-Aug	CAM/NNG		X	Occurs primarily in floodplains dominated by alkali scrub, alkali playas, vernal pools, and to a lesser extent alkali grasslands. Restricted to highly alkaline, silty-clay soils in association with Travers-Domino-Willows soil association. 139-500 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Atriplex coulteri Coulter's saltbush	FE CNPS 1B.2	X	X		March-Oct	RSS/NNG			In Western Riverside County, this species has the potential to occur within sage scrub and valley/foothill grassland habitats. Often associated with alkaline or clay soils. 3-460 meters.
Atriplex pacifica south coast saltscale	CNPS 1B.2		X	X	March-Oct	RSS/DSS			In western Riverside county, this species has the potential to occur within sage scrub habitats. A majority of known occurrences for this species are associated with coastal scrub and dune areas. 0-140 meters.
Atriplex parishii Parish's brittlescale	FE CNPS 1B.1		X		June-Oct	CAM/NNG		X	Occurs within alkaline soils and is most often associated with vernal pool and playa habitat types. 25-1900 meters.
Atriplex serenana var. *davidsonii* Davidson's saltscale	CNPS 1B.2		X		April-Oct	CAM/NNG		X	Occurs in gentle hillsides, valleys, and floodplains in semi alkaline mudflats, vernal pools, mesic southern needlegrass grassland, mixed native/non-native grassland and alkaline grassland plant communities in association with clay, loamy sand, or alkaline silty-clay soils. 10-200 meters.
Berberis nevinii Nevin's barberry	FE/SE CNPS 1B.1		X	X	March-June	AS/CC/MC/RSS/ SWS/MS/RS/TS		X	Occurs in a variety of habitats including cismontane woodland, chaparral, sage scrub and riparian scrub habitat. Often associated with sandy or gravelly soils. Closest natural known locations are "badlands" near Redlands and Vail Lake Area. 274-825 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Brodiaea filifolia thread-leaved brodiaea	FT/SE CNPS 1B.1	X	X		March-June	CAM/NNG		X	Occurs on gentle hillsides and floodplain in semi-alkaline mudflats, vernal pools, mesic needle grass, grassland, non-native grassland and alkali grassland Requires mesic, clay habitats; sometimes serpentine. Most known local locations associated with seasonally wet flats in the Perris Area. 25-1219 meters.
Brodiaea orcuttii Orcutt's brodiaea	CNPS 1B.1		X		May-July	CC/MC/CAM			Vernal pools, valley and foothill grasslands, closed-cone coniferous forest, cismontane woodland, chaparral, and meadows. Require mesic, well developed clay habitats; sometimes serpentine. Usually found in vernal pools and small drainages. 30-1692 meters.
Brodiaea santarosae Santa Rosa basalt brodiaea	CNPS 3				May-June	None			Occurs within Valley and foothill grasslands, associated with basaltic flows.
Callitropsis forbesii Tecate cypress	CNPS 1B.1				-	None			Occurs within closed cone coniferous forest and chaparral habitat. Usually associated with clay, gabbroic or metavolcanic soils. 250-1490 meters.
Calochortus palmeri var. *munzii* Munz's mariposa lily	FSS CNPS 1B.2				June-July	MC/CC	X		Occurs in seasonally moist, fine granitic loam on exposed knolls in the shade of lower montane coniferous forest and on moist, sandy clay in moist chaparral and meadows. 900-1640 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Ceanothus ophiochilus Vail Lake ceanothus	FT/ST CNPS 1B.1				Feb-March	None		X	Occurs within chamise chaparral habitats. Usually found on ridgelines and north facing slopes. Usually associated with gabbroic or pyroxenite-rich rock outcrops. 580-1065 meters.
Centromadia parryi ssp. *australis* southern tarplant	CNPS 1B.1		X	X	May-Nov	VFM/CAM/NNG			Occurs within marshes, swamps, vernally mesic valley/foothill grasslands, and vernal pools. Coastal species. 0-427 meters.
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	CNPS 1B.2				April-June	None			Occurs within Mojavean desert scrub, or pinyon and juniper woodland. Usually associated with sandy or gravelly soils. 300-1200 meters.
Comarostaphylis diversifolia ssp. *diversifolia* summer holly	CNPS 1B.2		X	X	April-June	CC/MC			Occurs within chaparral and Cismontane woodland habitat. Maritime habitats with relatively cool and wet weather. 30-550 meters.
Deinandra mohavensis Mojave tarplant	FSS/SE CNPA 1B.3				June-Oct	CC/MC/RSS/ SWS/MS/CWR/ SSR			Occurs within mesic areas chaparral and sage scrub habitats. Also associated with riparian scrub. 640-1600 meters.
Dudleya cymosa ssp. *ovatifolia* Santa Monica dudleya	FT CNPS 1B.2				May-June	RSS/CC/MC			Known only from the western Santa Monica Mountains.
Dudleya viscida sticky dudleya	CNPS 1B.2	X	X	X	May-June	RSS/MC/CC			Occurs within chaparral, cismontane woodland, and sage scrub habitat. Usually associated with rock outcrops. Locally a Santa Ana endemic. 10-550 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Eriastrum densifolium ssp. *sanctorum* Santa Ana River woolystar	FE/SE CNPS 1B.1				May-Sept	AS/RSS/MC/CC			Occurs within alluvial-fans or sandy river terraces. Known from one extended but fragmented population (associated with Santa Ana River). 91-610 meters.
Eryngium aristulatum var. *parishii* San Diego button celery	FE/SE CNPS 1B.1		X		April-June	RSS/NNG			Occurs within vernal pool, sage scrub and valley/foothill grasslands. Almost always under natural conditions in wetlands. 20-620 meters.
Galium angustifolium ssp. *jacinticum* San Jacinto mountains bedstraw	FSS CNPS 1B.3				June-Aug	None	X		Occurs within lower montane coniferous forest habitat. 1350-2100 meters.
Galium californicum ssp. *primum* California bedstraw	FSS CNPS 1B.2				May-July	CC/MC			Occurs within chaparral and lower montane coniferous forest. 1350-1700 meters.
Geothallus tuberosus Campbell's liverwort	CNPS 1B.1	X	X	X	-	RSS/NNG			Occurs within mesic areas of sage scrub habitat and vernal pools often associated with clay soils. 10-600 meters.
Heuchera hirsutissima shaggy-haired alumroot	FSS CNPS 1B.3				May-July	None			Occurs within subalpine coniferous forest and upper montane coniferous forest. 1520-3500 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Holocarpha virgata ssp. *elongata* graceful tarplant	CNPS 4.2		X	X	May-Nov	CC/MC/RSS/NNG			Occurs within cismontane woodland, chaparral, sage scrub and valley/foothill grassland habitat. Locally known within grasslands and oak woodlands on the Santa Rosa Plateau. Associated well developed clay soils. 60-1100 meters.
Hordeum intercedens vernal barley	CNPS 3.2		X		March-June	RSS/NNG			Occurs in vernal pools or mesic areas within sage scrub and valley/foothill grassland habitats. Often associated with saline flats and depressions. 5-100 meters.
Horkelia cuneata ssp. *puberula* mesa horkelia	CNPS 1B.1	X	X	X	Feb-July	RSS/MC/CC			Occurs in chaparral, cismontane woodland, and coastal scrub. Requires sandy or gravelly sites. Known locally on the Pacific slope of the Santa Ana Mountains. 70-810 meters.
Hulsea vestita ssp. *callicarpha* beautiful hulsea	CNPS 4.2				May-Oct	MC/CC			Occurs within chaparral and lower montane coniferous forest. Often associated with rocky or gravelly, granitic soils. 915-3050 meters.
Imperata brevifolia California satintail	CNPS 2.1	X	X	X	Sept-May	CC/MC/RSS/ SWS/MS/RS/TS			Occurs in a variety of habitat types, including chaparral, sage scrub, Mojavean desert, Riparian scrub, meadows and seeps. Often associated alkaline soils and springs. 0-500 meters.
Juglans californica southern California black walnut	CNPS 4.2		X	X	March-Aug	CC/MC/RSS			Occurs on slopes and in canyons and valleys within chaparral, cismontane woodland, and sage scrub habitats. 50-900 meters.
Juncus luciensis Santa Lucia dwarf rush	CNPS 1B.2				April-July	None			Occurs in chaparral, meadows and seeps, and vernal pools.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	CNPS 1B.1		X		Feb-June	VFM/CAM/NNG		X	Occurs primarily in highly alkaline, silty-clay soils. Travers-Domino-Willows soil association within alkali vernal plains community. 1-1220 meters.
Lilium humboldtii ssp. *ocellatum* ocellated Humboldt lily	CNPS 4.2		X	X	March-Aug	CC/MC/RSS/ SWS/CWR/SSR			Occurs within openings in a variety of habitat types including: chaparral, cismontane woodland, sage scrub, lower montane coniferous forest and riparian woodland. Generally associated with relatively wet and cool regions. 30-1800 meters.
Lepechinia cardiophylla heart-leaved pitcher sage	CNPS 1B.2				April-July	MC/CC		X	Occurs in closed-cone coniferous forest, chaparral, and cismontane woodland. 520-1370 meters.
Lilium parryi lemon lily	CNPS 1B.2				July-Aug	SWS/CWR/SSR			Occurs within lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Prefers wet, mountainous terrain; generally in forested areas, on shady edges of streams, in open boggy meadows and seeps. 1220-2745 meters.
Limnanthes gracilis ssp. *parishii* Parish's meadowfoam	CNPS 1B.2				April-June	CAM/VFM/NNG			Occurs within lower montane coniferous forest, meadows, seeps, and vernal pool habitats. Almost always under natural conditions in wetlands. 600-2000 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Mimulus clevelandii Cleveland's bush monkeyflower	CNPS 4.2				April-July	CC/MC			Occurs within chaparral, cismontane woodland, and lower montane coniferous forest. Often associated with gabbroic soils in disturbed areas/ openings with above described habitat types. 815-2000 meters.
Mimulus diffusus Palomar monkeyflower	CNPS 4.3				April-June	CC/MC			Occurs within chaparral and lower montane coniferous forest. Often associated with sandy or gravelly soils. 1220-1830 meters.
Monardella hypoleuca ssp. *lanata* felt-leaved monardella	CNPS 1B.2		X	X	June-Aug	CC/MC			Occurs within chaparral and cismontane woodland habitat. 300-1575 meters. Ssp. lanata is excluded from Riverside Co. Northern extent of range is San Luis Rey River in San Diego Co.
Monardella macrantha ssp. *hallii* Hall's monardella	CNPS 1B.3				June-Oct	CC/MC			Occurs within broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, and valley and foothill grassland habitats. Often associated with dry slopes and ridges in openings within the above communities. 730-2195 meters.
Muhlenbergia californica California muhly	CNPS 4.3		X	X	June-Sept	CC/MC/RSS/ SWS/MS/RS/TS/ CWR/SSR/NNG			Occurs within wetlands or mesic sites in chaparral, sage scrub, lower montane forest habitats. Also found in meadows and seeps. Locally known in the San Jacinto Mountains. 100-2000 meters.
Myosurus minimus ssp. *apus* little mousetail	CNPS 3.1		X		March-June	NNG/CAM		X	Occurs in valley/foothill grasslands with alkaline soils and vernal pools. 20-640 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Nama stenocarpum mud nama	CNPS 2.2		X		Jan-July	VFM/CAM/SWS/ MS/RS/TS/CWR/ SSR/NNG		X	Occurs within marshes and along the margins of lakes. 5-500 meters.
Navarretia fossalis spreading (Moran's) navarretia	FT CNPS 1B.1		X		April-June	VFM/CAM/SWS/ MS/RS/TS/CWR/ SSR/NNG	X		Primarily associated with vernal pools, depressions, and ditches in areas that once supported vernal pools. Often associated with a larger vernal floodplain(s) dominated by annual alkali grasslands and alkali playa. 30-1300 meters.
Navarretia prostrata prostrate vernal pool navarretia	CNPS 1B.1		X		April-July	RSS/NNG		X	Occurs within wetlands and mesic sites found within habitat types including: sage scrub, meadows and seeps alkali valley/foothill grassland. Also associated with Vernal pools. 15-700 meters.
Nolina cismontana peninsular nolina	CNPS 1B.2				May-July	None			Occurs within chaparral and sage scrub habitats. Often associated with sandstone or gabbro soils. 140-1275 meters.
Orcuttia californica California Orcutt grass	FE/SE CNPS 1B.1		X		April-Aug	NNG/CAM	X		All known localities are associated with vernal pools. Specifically, southern basaltic clay pan and alkaline vernal pools.
Oxytheca caryophylloides (Sidotheca caryophylloides) chickweed oxytheca	CNPS 4.3				July-Sept	None			Occurs within lower montane coniferous forest habitat. Often associated with sandy soils. 1114-2600 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Penstemon californicus California beardtongue	FSS CNPS 1B.2				May-Aug	MC/CC			Occurs within chaparral, lower montane coniferous forest, and pinyon juniper woodland. Often associated with sandy soils. 1170-2300 meters.
Pentachaeta aurea ssp. *allenii* Allen's daisy	CNPS 1B.1	X	X	X	March-June	RSS/NNG			Occurs within openings in sage scrub and valley/foothill grassland habitats. Locally known on the west slope of the Santa Ana Mountains in Orange County75-520 meters.
Phacelia stellaris Brand's phacelia	SC CNPS 1B.1		X	X	March-June	AS/MS/RS	X		Occurs within sandy washes and alluvial benches in alluvial floodplains. The species is generally dependant on periodic flooding and sediment transport. Generally a coastal species, but few inland locations have been recorded. 1-400 meters.
Phacelia suaveolens ssp. *keckii* Santiago Peak phacelia	CNPS 1B.3				May-June	MC/CC			Occurs within closed-cone coniferous forest and chaparral. 545-1600 meters. Known from only four occurrences.
Polygala cornuta var. *fishiae* fish's milkwort	CNPS 4.3		X	X	May-Aug	CC/MC/SWS/ CWR/SSR			Occurs within chaparral, cismontane woodland, and riparian woodland. Locally known in the Santa Ana Mountains within relatively wetter environments. 100-1000 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Potentilla rimicola cliff cinquefoil	CNPS 2.3				July-Sept	None			Occurs within subalpine coniferous forest and upper montane coniferous forest. Associated with granitic, rocky areas and soils. Known in CA approximately five occurrences in the San Jacinto mountains. 2400-2800 meters.
Quercus dumosa Nuttall's scrub oak	CNPS 1B.1		X	X	Feb-April	RSS/CC/MC			Occurs in coastal areas within closed-cone coniferous forest chaparral, sage scrub. Usually associated with sandy, clay loam soils. 15-400 meters.
Quercus engelmannii Engelmann oak	CNPS 4.2		X	X	July-Dec	CC/MC/SWS/ CWR/SSR/NNG/ CLOWR/CLOWU			Occurs within chaparral, cismontane woodland, riparian woodland, valley/foothill grassland habitat. Locally known in the Santa Rosa Plateau and the Crown Valley area near lake Skinner. 50-1300 meters.
Satureja chandleri San Miguel savory	CNPS 1B.2		X	X	March-July	RSS/NNG/MC/ CC	X		Occurs in chaparral, cismontane woodland, coastal scrub, riparian woodland, valley/foothill grasslands. Requires rocky, gabbroic or metavolcanic substrate. Often found within these plant communities after burns. Locally known on the eastern slope of the Santa Ana Mountains. 20-1200 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat
Sibaropsis hammittii Hammitt's clay-cress	CNPS 1B.2	X	X	X	March-April	CC/MC/NNG	X		Occurs within openings in chaparral and valley/foothill grasslands. Often associated higher elevation (1000 meters) and within well developed clay soils. 720-1065 meters.
Sidalcea neomexicana Salt Spring checkerbloom	CNPS 2.2		X		March-June	CC/MC/RSS			Usually occurs in wetlands, but occasionally found in non wetland environs. Occurs within chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and alkaline playas. 15-1530 meters.
Tetracoccus dioicus Parry's tetracoccus	CNPS 1B.2				April-May	CC/MC/RSS			Occurs in stony and gabbroic soil within chaparral and coastal scrub. 165-1000 meters.
Tortula californica California screw moss	CNPS 1B.2		X	X	-	NNG/CAM			Occurs within chenopod scrub and valley/foothill grassland. Usually associated with sandy, soil. 10-1460 meters.
Trichocoronis wrightii var. wrightii Wright's trichocoronis	CNPS 2.1				May-Sept	VFM/CAM/NNG/ SWS/CWR/SSR	X		Occurs within meadows and seeps, marshes and swamps, riparian forest and vernal pool habitat. Usually associated with alkaline soils. 5-435 meters.
Viguiera viguiera (purisimae) La Purisima viguiera	CNPS 2.3				April-Sept	MC/CC			Occurs within coastal bluff scrub and chaparral. CNPS maps this species range within Orange and San Diego Counties only. 365-425 meters.

Species Name	Status Listing	Proposed Alberhill Substation Survey Area	Proposed 115kV T/L Survey Area	Proposed 500kV T/L Survey Area	Blooming Period	Plant Community	Narrow Endemic Species	Criteria Area Species	Life Form and Habitat

Definitions:

Plant Communities:

AS	Alluvial Scrub
CAM	Cismontane Alkali Marsh
CC	Chamise Chaparral
CLOWR	Coast Live-Oak Woodland-Riparian
CLOWU	Coast Live-Oak Woodland-Upland
CWR	Southern Cottonwood/Willow Riparian Forest
DSS	Diegan Sage Scrub
MC	Mixed Chaparral
MS	Mulefat Scrub
NNG	Nonnative Grassland
RS	Riparian Scrub
RSS	Riversidean Sage Scrub
SSR	Southern Sycamore Riparian Woodland
SWS	Southern Willow Scrub
TS	Tamarisk Scrub
VFM	Valley Freshwater Marsh

CNPS Status Codes:

List 1A	Presumed extinct in California
List 2	Presumed extinct in California, but more common elsewhere
List 3	We need more information about this plant
List 4	Limited distribution (watch list)
.1	Seriously endangered in CA (over 80% of occurrences threatened/high degree and immediacy of threat)
.2	Fairly endangered in CA (20-80% occurrences threatened)
.3	Not very endangered in CA (<20% of occurrences threatened or no current threats known)

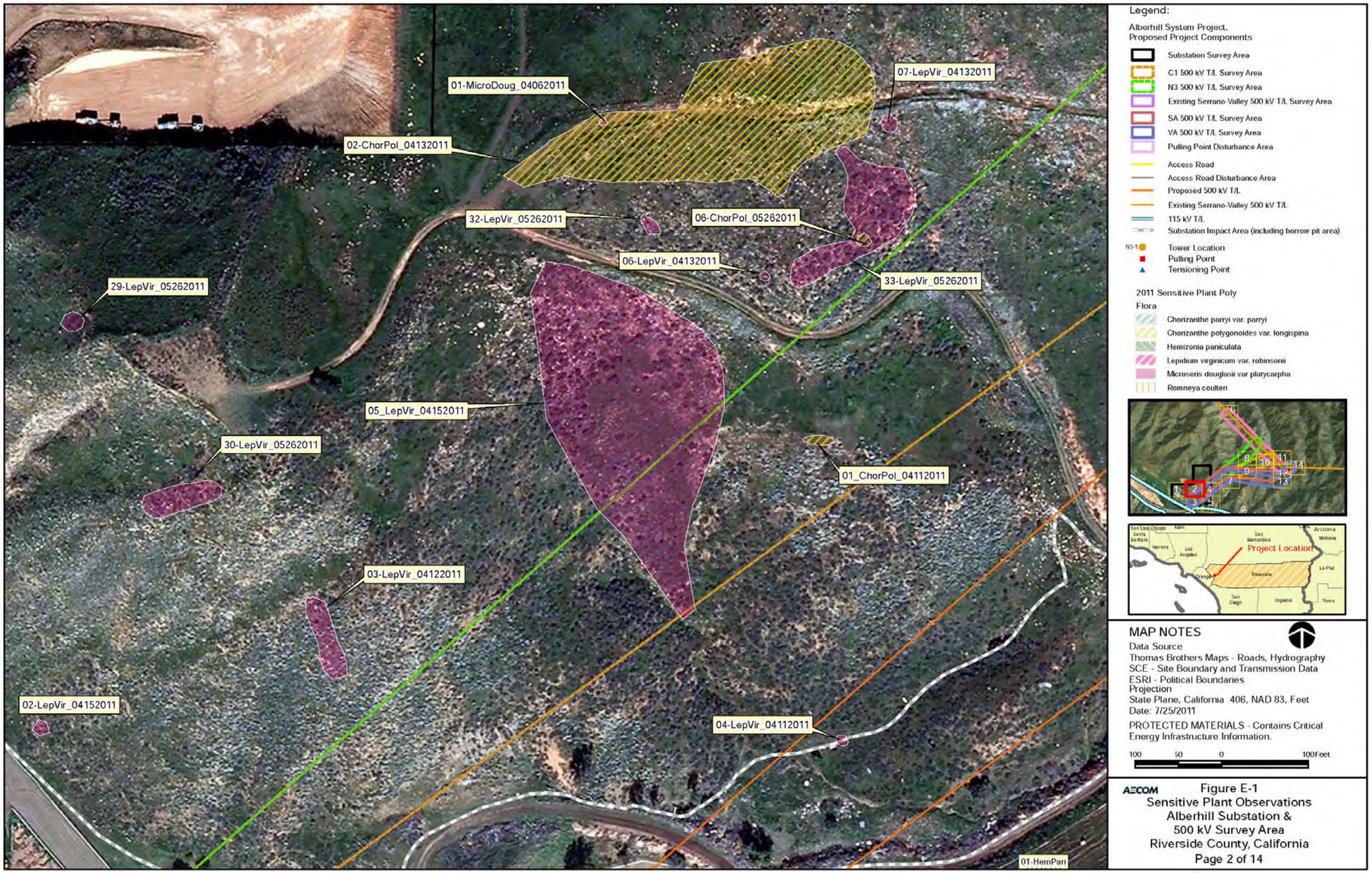
Status Codes:

FE	Federally Endangered
FT	Federally Threatened
SE	State Endangered
ST	State Threatened

Appendix E
Sensitive Plant Observation Figures



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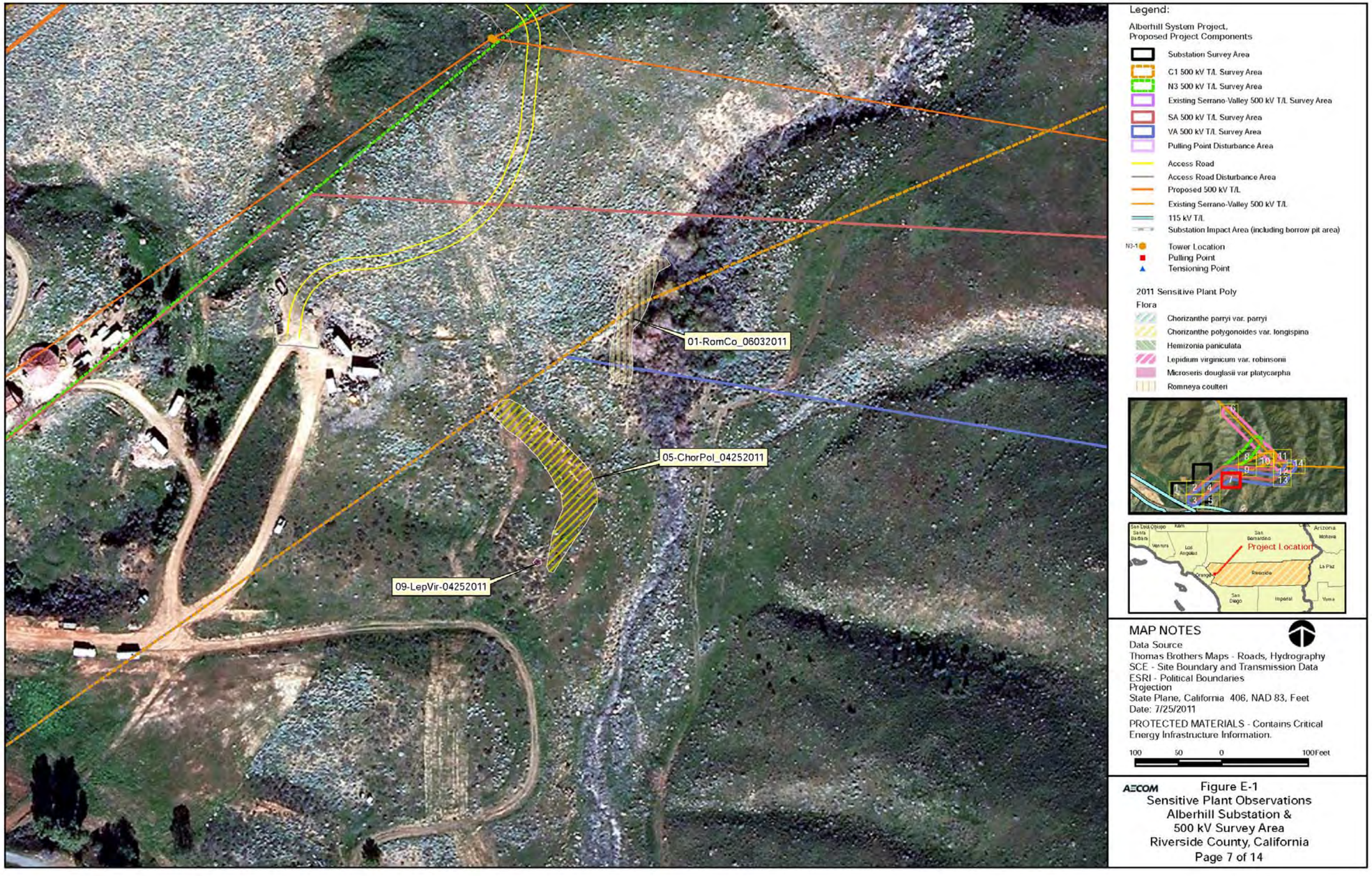
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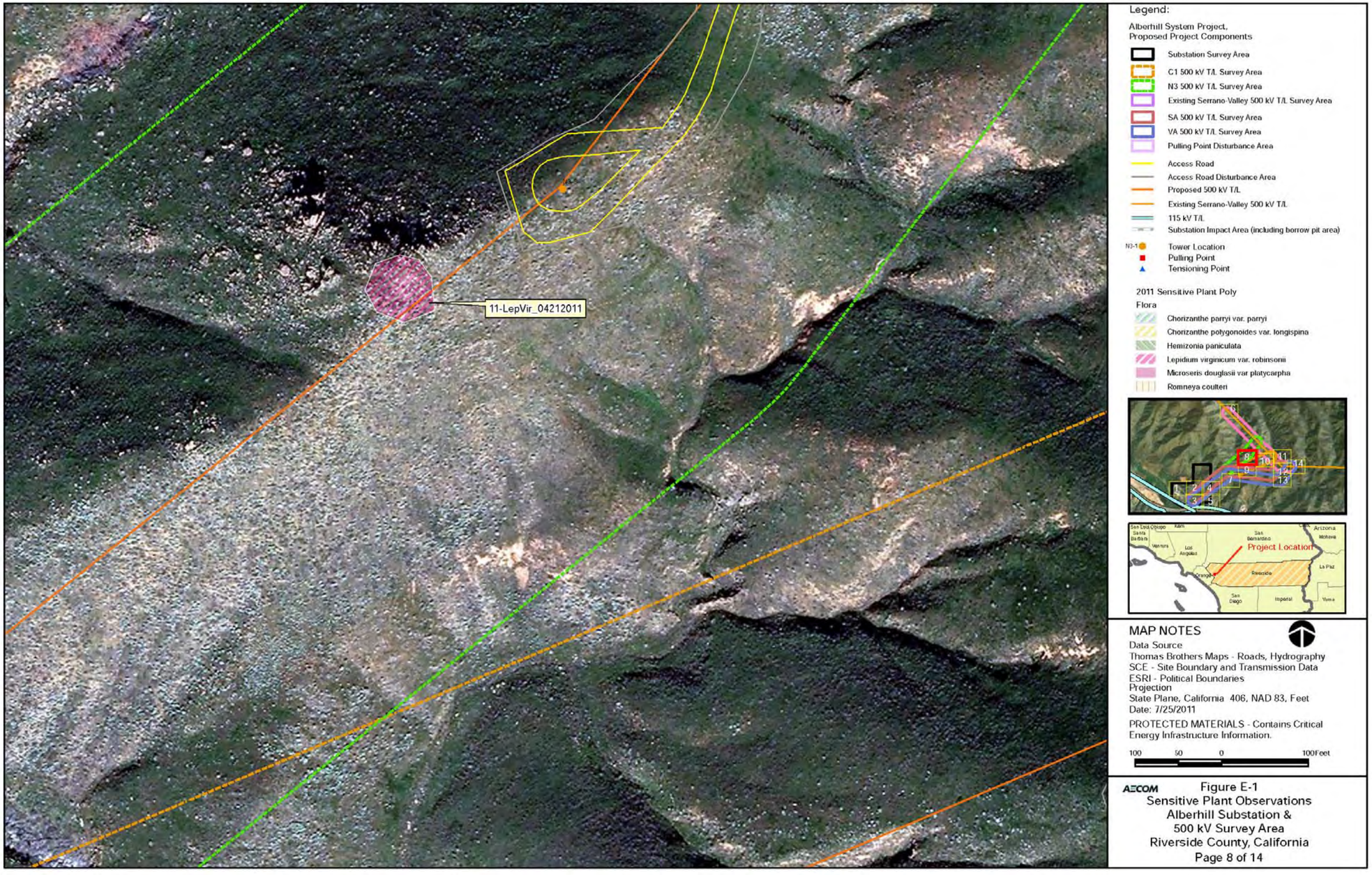
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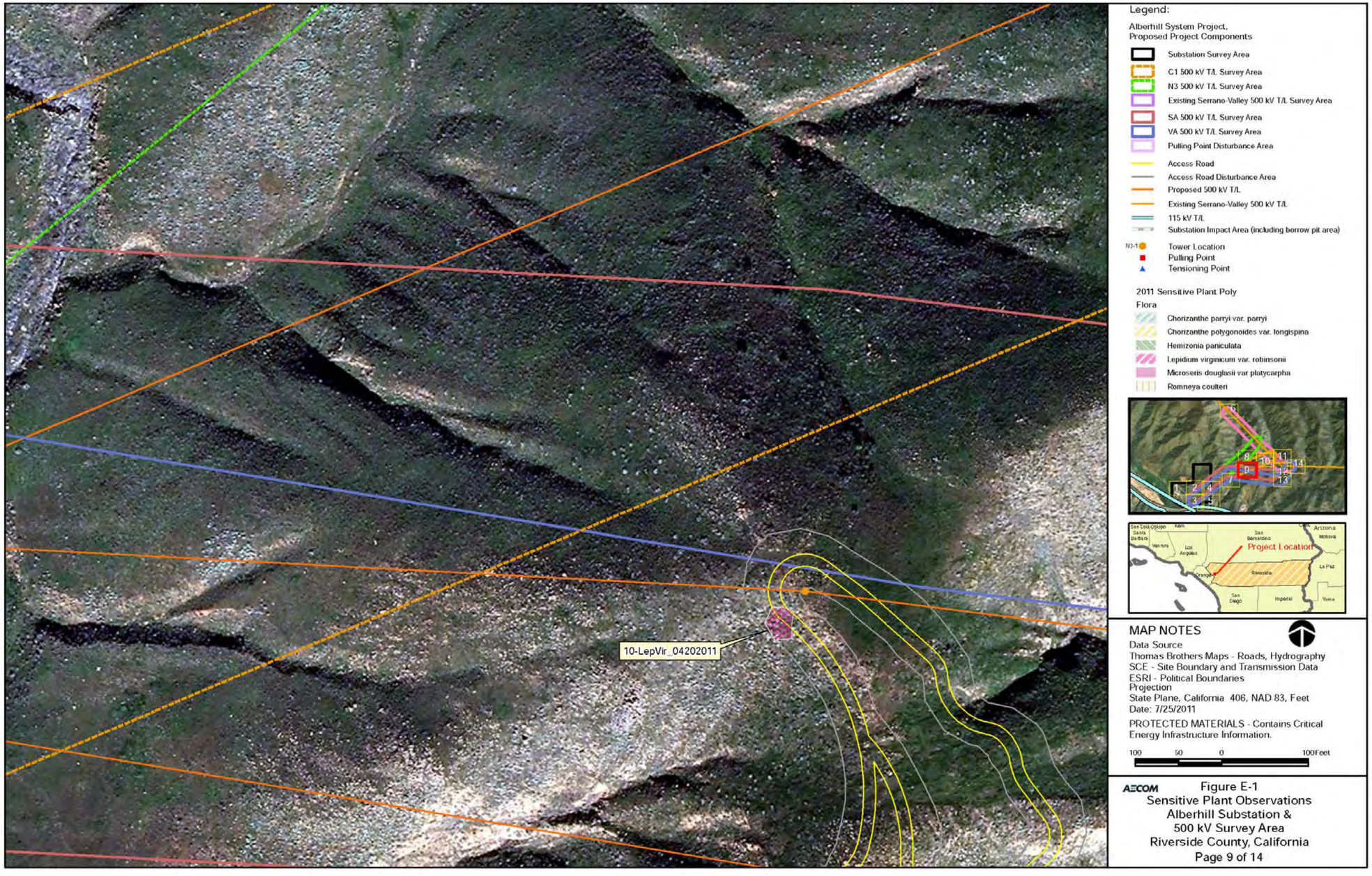
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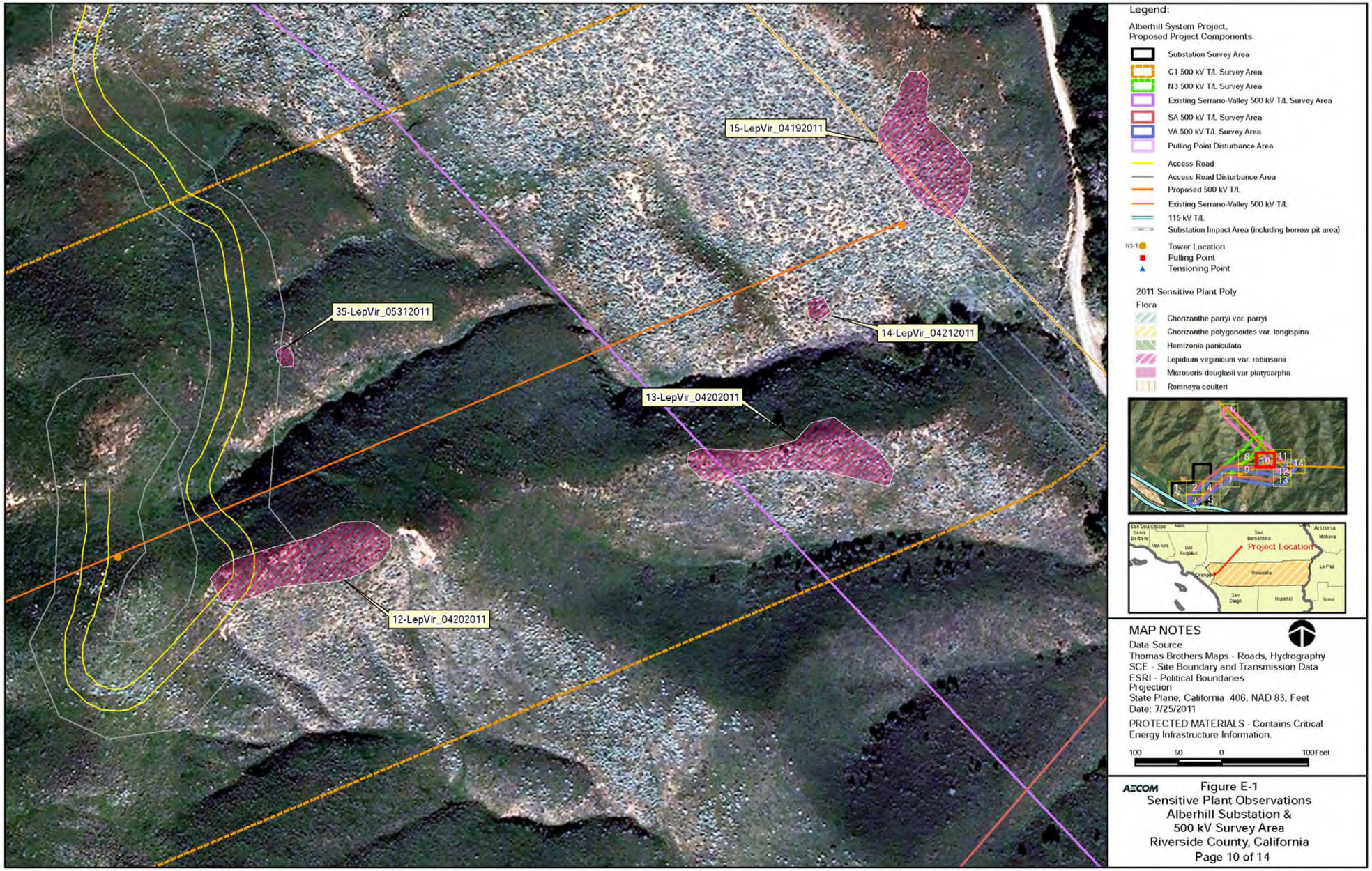
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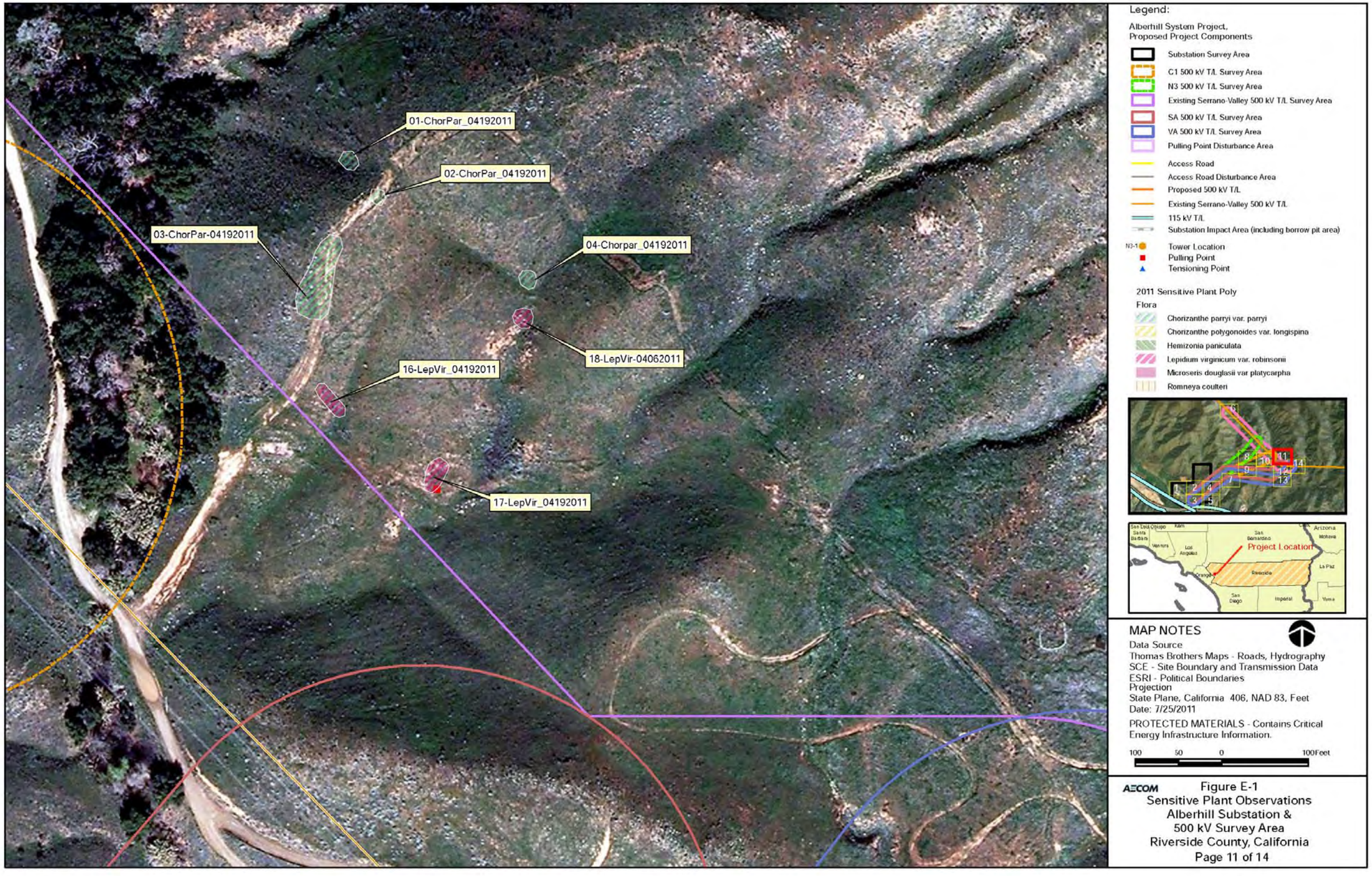
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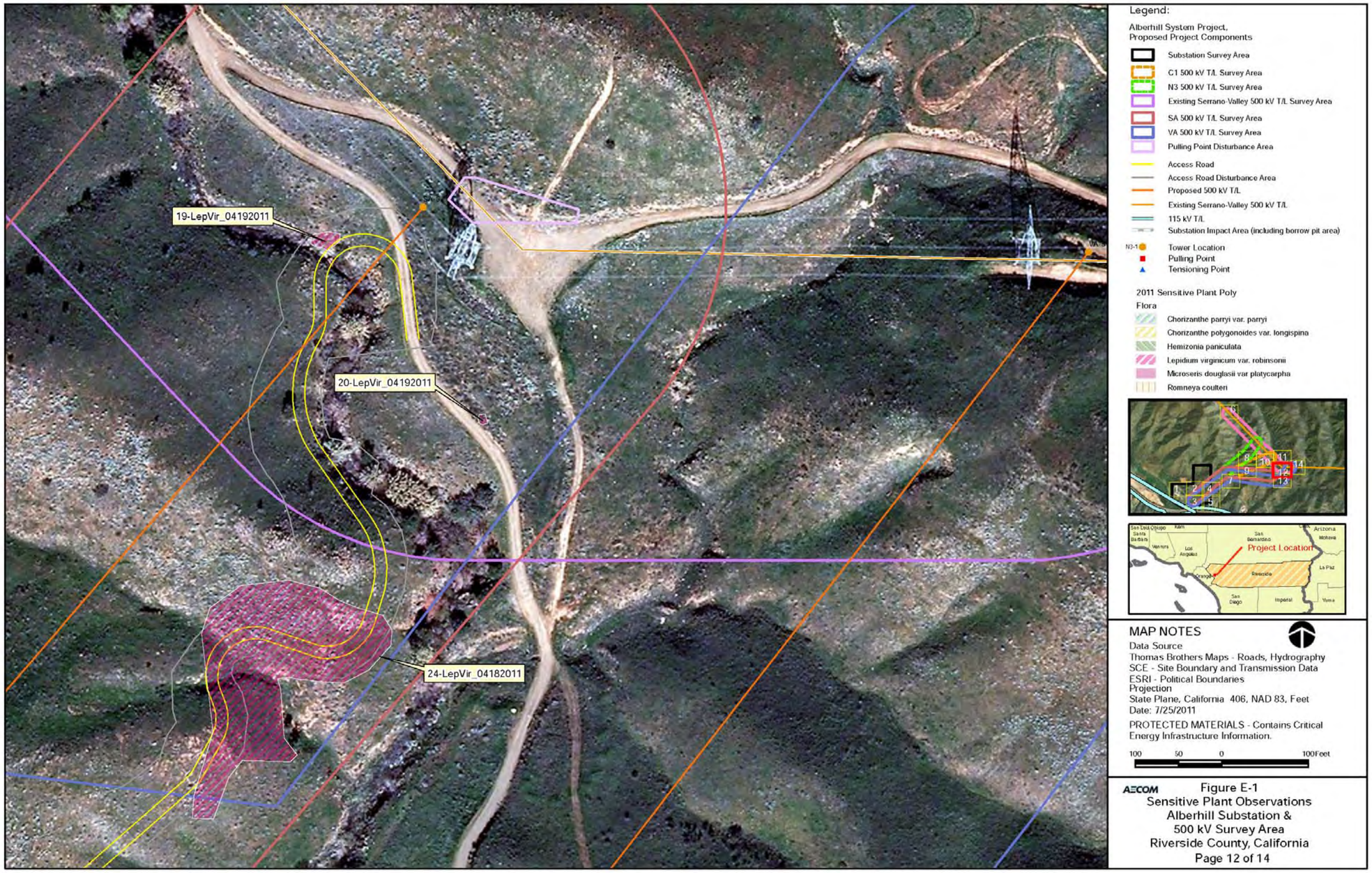
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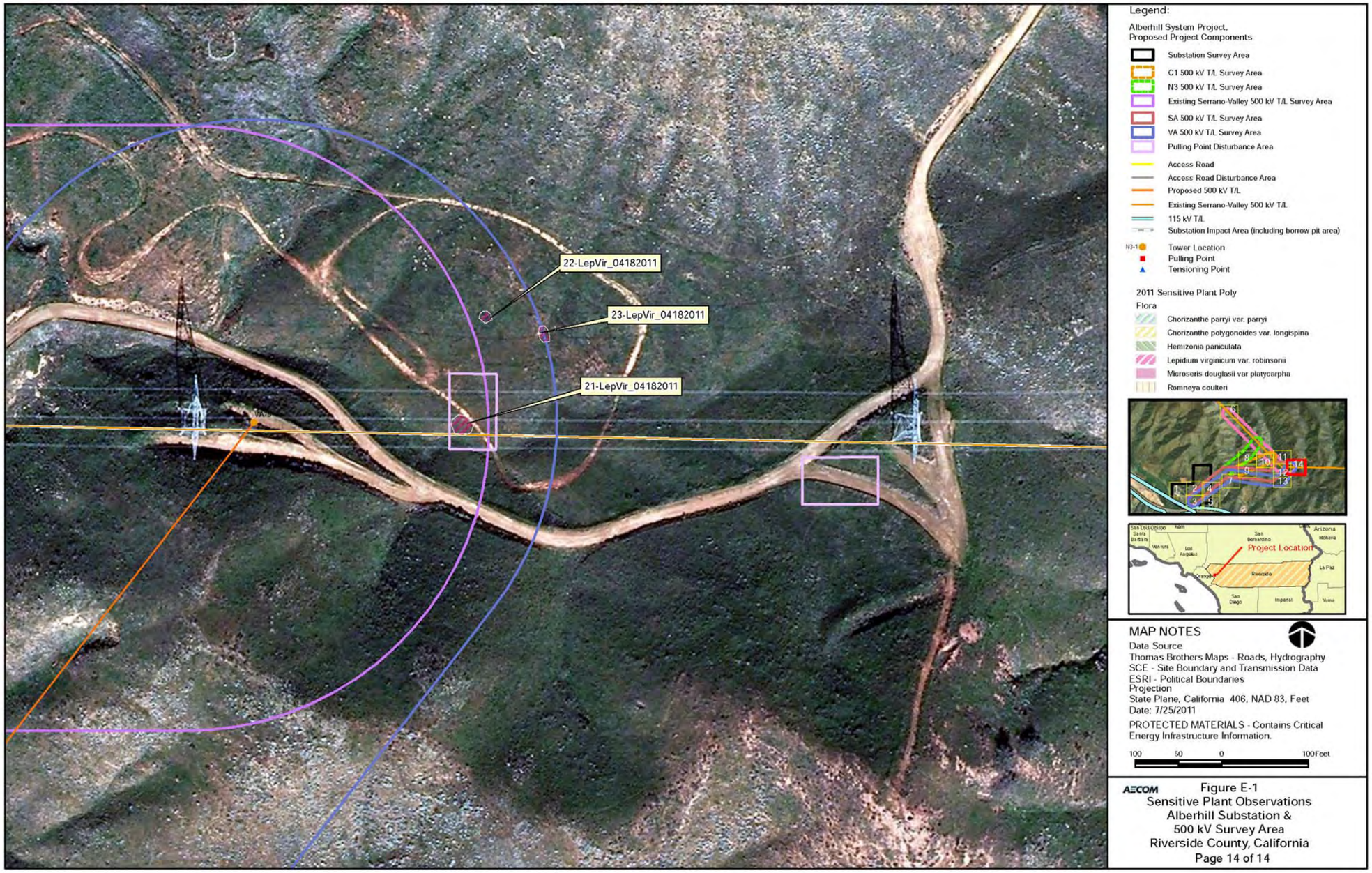
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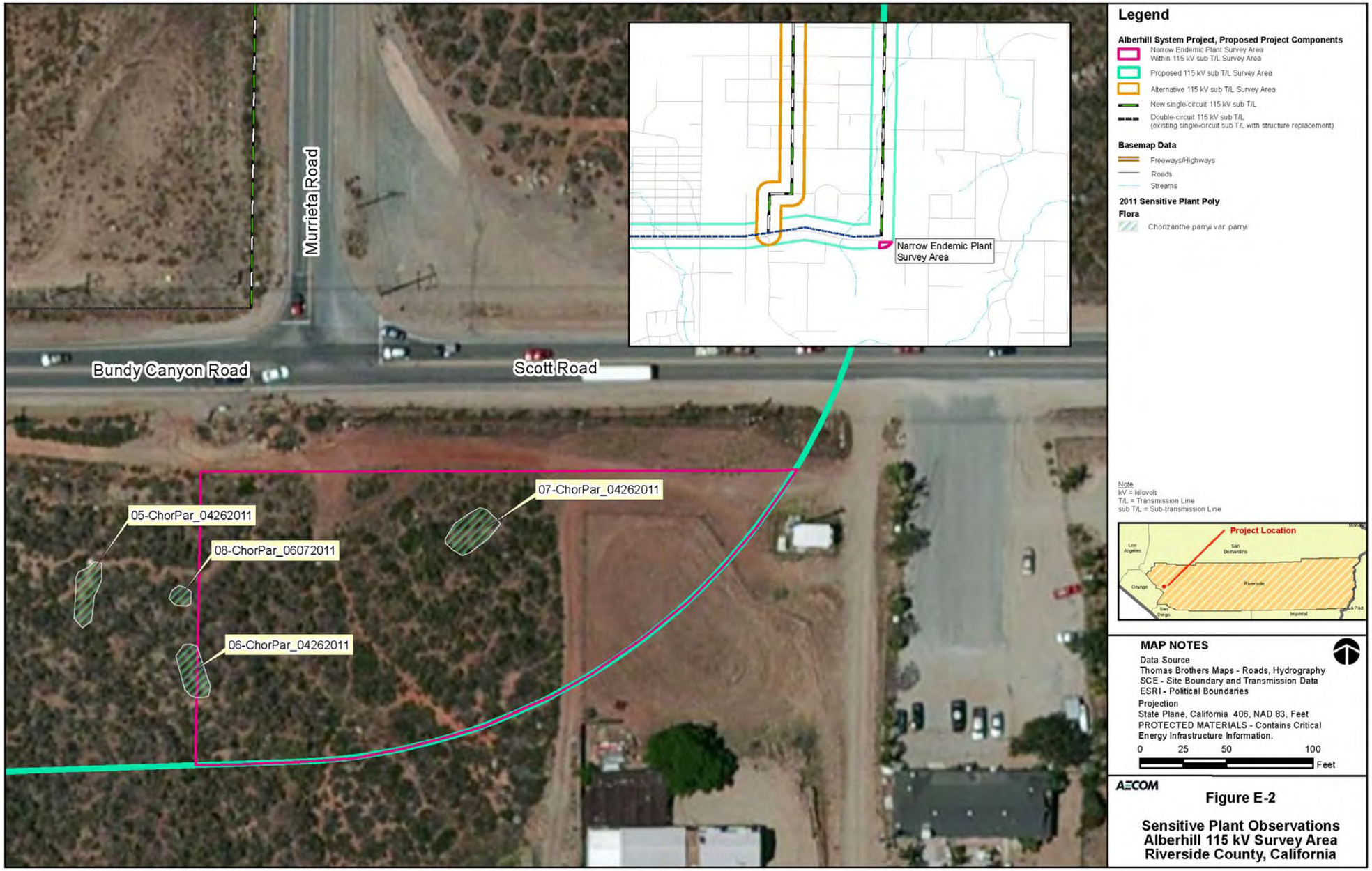
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Appendix F
California Native Species Field Survey Forms

Appendix F-1
California Native Species Field Survey Form
File Name 01-ChorPar_04192011

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): 04/19/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 500 Subsequent Visit? [ ] yes [X] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1649 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.391659, 33.744612

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Bebbia juncea (Benth.) Greene. Associates include Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Microseris lindleyi (DC.) Gray, Eschscholzia californica Cham., Pectocarya recurvata Jtn., Pectocarya recurvata Jtn..

Substrates/soil: Clay Loam
Aspects/Slope: S, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: Open Space

Visible disturbances: Recent fire, road

Threats: Increased non-native grass/annual distribution and density

Comments: Carpet of species extending down slope c. 20 ft

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-2
California Native Species Field Survey Form
File Name 02-ChorPar_04192011

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): 04/19/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 70 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: undetrmnd Number / UCR Herbarium Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1647 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.391546, 33.744495

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Avena barbata Brot.. Associates include Bromus rubens L., Brassica geniculata (Desf.) Ball, Chaenactis glabriuscula DC., Cryptantha intermedia (Gray) Greene, Microseris lindleyi (DC.) Gray.

Substrates/soil: Clay Loam
Aspects/Slope: SE, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor
Immediate AND surrounding land use: Open Space

Visible disturbances: Recent fire (last 5 years)

Threats: Increased non-native grass and annual distribution and density

Comments: Chaparral community re-sprouting post burn

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-3
California Native Species Field Survey Form
File Name 03-ChorPar_04192011

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): 04/19/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 250 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na [X] no [ ] unk.
Yes Occ. #

Collection? If yes: undetrmind Number; UCR Herbarium Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative; 100 % flowering; 0 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1645 feet above msl

T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.391808, 33.744221

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Microseris lindleyi (DC.) Gray, Lotus strigosus (Nutt.) Greene. Associates include Bromus rubens L., Eschscholzia californica Cham., Erodium botrys (Cav.) Bertol., Pectocarya linearis (R. & P.) DC., Lasthenia gracilis (DC.) Greene. Other dominant species include Bebbia juncea

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 25 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Within and adjacent (west of) of formerly graded area; Chorizanthe is abundant in both disturbed and undisturbed areas

Threats: Increase non-native grass/annual distribution and density

Comments: Within range of previously recorded pops visited in 2010 and 2011 ref site visit. Part of a larger population that extends north and south of this marked location

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T. Salvato
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-4
California Native Species Field Survey Form
File Name 04-ChorPar_04192011

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): 04/19/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 100-150 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Tim Searl
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1622 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.390975, 33.744232

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Bromus rubens L., Eschscholzia californica Cham.. Associates include Eriogonum gracile Benth. ?, Bowlesia incana Ruiz & Pavon, Euphorbia albomarginata T. & G.. Other dominant species include na

Substrates/soil: Clay Loam
Aspects/Slope: S, 20 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses

Threats: Increased non-native grass/annual distribution and density

Comments: Radius of pop. approx. 30 feet

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[ ] Other: _____

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-5
California Native Species Field Survey Form
File Name 05-ChorPar_04262011

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): 04/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 200 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 5 % vegetative 95 % flowering 0 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Romoland Elevation: 1688 feet above msl
T 6S R 3W Sec 20 , ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.206637, 33.641192

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Mixed Chaparral. Dominants include Adenostoma fasciculatum H. & A., Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Ceanothus crassifolius Torr., Salvia mellifera Greene. Associates include Cryptantha intermedia (Gray) Greene, Salvia columbariae Benth., Festuca myuros L., Brassica geniculata (Desf.) Ball. Other dominant species include Camissonia frutella

Substrates/soil: Clay
Aspects/Slope: W, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space, rural residential

Visible disturbances: None

Threats: Non-native grass/annual spread and density

Comments: Same population as last year. Numbers estimated this year due to juvenile status of plants. Area of pop is c. 20 x 10 feet

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-6
California Native Species Field Survey Form
File Name 06-ChorPar_04262011

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): 04/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 10 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na [X] no [ ] unk.
Yes Occ. #

Collection? If yes: na Number; na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative; 100 % flowering; 0 % fruiting

Animal Information
_____ # adults; _____ # juveniles; _____ # larvae; _____ # egg masses; _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Romoland Elevation: 1699 feet above msl
T 6S R 3W Sec 20, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.20642, 33.641032

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Adenostoma fasciculatum H. & A., Ceanothus crassifolius Torr., Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Salvia mellifera Greene, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley. Associates include Cryptantha intermedia (Gray) Greene, Eriophyllum confertiflorum (DC.) Gray, Salvia columbariae Benth., Plagiobothrys collinus (Phil.) Jtn., Festuca octoflora Walt..

Substrates/soil: Clay
Aspects/Slope: NW, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space, residential/commercial

Visible disturbances: Road

Threats: Increased non-native grass/annual distribution and density

Comments: Located within clay patch under shrub

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-7
California Native Species Field Survey Form
File Name 07-ChorPar_04262011

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): 04/26/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 25 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 10 % vegetative 90 % flowering 0 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Romoland Elevation: 1707 feet above msl

T 6S R 3W Sec 21, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.205895, 33.641294

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Mixed Chaparral. Dominants include Adenostoma fasciculatum H. & A., Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Salvia mellifera Greene, Ceanothus crassifolius Torr.. Associates include Festuca myuros L., Microseris lindleyi (DC.) Gray, Cryptantha intermedia (Gray) Greene, Gilia angelensis V. Grant, Salvia columbariae Benth..

Substrates/soil: Clay

Aspects/Slope: NW, 10 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor

Immediate AND surrounding land use: Open space, residential/commercial

Visible disturbances: Creation of unimproved dirt roads

Threats: Increased non-native grass/annual distribution and density

Comments: Mature chaparral with well developed cryptogamic crust, plants very small and in a juvenile stage of development chaparral

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-8
California Native Species Field Survey Form
File Name 08-ChorPar_06072011

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): 06/07/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe parryi var. parryi*

Common Name: Parry's spineflower

Species Found? [X] Yes [ ] No If not, why? _____

Total No. Individuals 50 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 80 % flowering 20 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Romoland Elevation: 1696 feet above msl
T 6S R 3W Sec 20 , ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.206449, 33.641166

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Mixed Chaparral. Dominants include Adenostoma fasciculatum H. & A., Ceanothus crassifolius Torr., Eriophyllum confertiflorum (DC.) Gray, Salvia mellifera Greene, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams. Associates include Chorizanthe fimbriata Nutt., Camissonia hirtella (Greene) Raven, Cryptantha intermedia (Gray) Greene, Eriogonum gracile Benth., Salvia columbariae Benth.. Other dominant species include na

Substrates/soil: Clay
Aspects/Slope: W, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Spread and increased density of non-native grass and annuals

Comments: Population occurs in clay with well developed biotic crust in an opening between native shrubs

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-9
California Native Species Field Survey Form
File Name 01-ChorPol_04112011

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): 04/11/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Chorizanthe polygonoides var. longispina*

Common Name: long-spined spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 70 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: undetrmnd Number UCR Herbarium Museum / Herbarium

Reporter: Teresa Salvato

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 100 % flowering 0 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1301 feet above msl

T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.409665, 33.737583

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Encelia farinosa, Dichelostemma capitatum (Benth.) Alph. Wood, Hemizonia fasciculata (DC.) Torr. & Gray, Avena barbata Brot.. Associates include Pectocarya linearis (R. & P.) DC., Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth, Cryptantha intermedia (Gray) Greene, Bromus rubens L..

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 20 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: None

Comments: Ridge top

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-10
California Native Species Field Survey Form
File Name 02-ChorPol_04132011

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): 04/13/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Chorizanthe polygonoides var. longispina*

Common Name: long-spined spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals > 1000 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: undetrmnd Number UCR Herbarium Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 80 % flowering 20 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1380 feet above msl

T 5S R 5W Sec 16, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.410365, 33.738579

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Allium haematochiton S. Wats., Dichelostemma capitatum (Benth.) Alph. Wood, Encelia farinosa. Associates include Bromus rubens L., Crassula connata (R. & P.) Berger, Lepidium nitidum Nutt., Plantago erecta Morris, Lasthenia gracilis (DC.) Greene. Other dominant species include Lessingia filanginifolia, Lotus scoparius, Calystegia macrostegia, Erigonum gracile

Substrates/soil: Cobbly-Clay

Aspects/Slope: S, 10 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Former road grading in some portions of observed population

Threats: Regarding or reuse of unimproved dirt road and spread of non-native grasses/annuals

Comments: Occurs on dirt access roads and clay lenses south/north of east/west trending road.

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T. Salvato
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-11
California Native Species Field Survey Form
File Name 03-ChorPol_04212011

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): 04/21/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Chorizanthe polygonoides var. longispina*

Common Name: long-spined spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 300 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1313 feet above msl

T 5S R 5W Sec 16, NE 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.406794, 33.737939

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Hemizonia fasciculata (DC.) Torr. & Gray, Encelia farinosa, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley. Associates include Bromus rubens L., Lupinus bicolor Lindl., Lotus strigosus (Nutt.) Greene, Centaurea melitensis L..

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 20 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space and rural residential

Visible disturbances: Formerly graded area. Visible scarring still visible. Although Chor pol is quite robust in these areas

Threats: Future grading, residential activities, spread of non-native grasses/annuals

Comments: This population was observed in 2010 rare plant surveys. Current pop more robust and extensive than previous year. Additional photo points define northern extent. southern half of poly the same

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T. Salvato
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-12
California Native Species Field Survey Form
File Name 04-ChorPol_04222011

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): 04/22/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe polygonoides var. longispina*

Common Name: long-spined spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 600 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 15 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1330 feet above msl
T 5S R 5W Sec 16, NE 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.405993, 33.737471

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Lessingia filaginifolia (H. & A.) M.A. Lane, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Encelia farinosa, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams. Associates include Bromus rubens L., Pectocarya linearis (R. & P.) DC., Festuca octoflora Walt., Lupinus concinnus Agardh., Centaurea melitensis L.. Other dominant species include Cryptantha intermedia, Microceris lindlyii

Substrates/soil: Cobbly-Clay
Aspects/Slope: SW, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor
Immediate AND surrounding land use: Open space and rural residential

Visible disturbances: All individuals occur within a graded pad and on a graded slope. Slope is recovering w/ native/nonnative veg. species. Pad is generally barren.
Threats: Re-grading and spread of non-native grasses/annuals

Comments: Population recorded in 2010. Boundary expanded from previous year population appears more robust

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T.Salvato
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-13
California Native Species Field Survey Form
File Name 05-ChorPol_04252011

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): 04/25/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe polygonoides var. longispina*

Common Name: long-spined spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 425 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 5 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1368 feet above msl
T 5S R 5W Sec 16, NE 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.402486, 33.739003

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Salvia apiana Jeps., Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Encelia farinosa, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt. Associates include Hemizonia fasciculata (DC.) Torr. & Gray, Plantago erecta Morris, Bromus rubens L., Avena barbata Brot., Centaurea melitensis L..

Substrates/soil: Cobbly-Clay
Aspects/Slope: E, 15 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space and rural residential

Visible disturbances: None

Threats: Increased non-native grass/annual distribution and density

Comments: Occurs in large open clay lens with cryptobiotic crust surrounded by NNG and dense RSS habitat

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-14
California Native Species Field Survey Form
File Name 06-ChorPol_05262011

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): 05/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Chorizanthe polygonoides var. longispina*

Common Name: long-spined spineflower

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 1 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1348 feet above msl
T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.409497, 33.738232

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Hemizonia fasciculata (DC.) Torr. & Gray, Encelia farinosa, Artemisia californica Less., Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth. Associates include Avena barbata Brot., Centaurea melitensis L., Bromus madritensis L. ssp. rubens (L.) Husnot, Lepidium virginicum L. var. robinsonii (Thell.) C. Hitchc.. Other dominant species include na

Substrates/soil: Cobbly-Clay
Aspects/Slope: E, 20 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Increase in non-native grass/annual density/distribution

Comments: One individual observed growing in clay lens, above fist sized cobbles. Area open between native perennials

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [ ]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [ ] no [ ]

Appendix F-15
California Native Species Field Survey Form
File Name 01-LepVir_04122011

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): 04/12/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 45 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na [X] no [ ] unk. Yes Occ. #

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 5 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1332 feet above msl

T 5S R 5W Sec 16, NW 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.412987, 33.738374

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Salvia apiana Jeps., Keckiella antirrhinoides (Benth.) Straw. Associates include Eschscholzia californica Cham., Phacelia cicutaria Greene var. hispida (Gray) J.T. Howell, Microseris lindleyi (DC.) Gray, Salvia columbariae Benth., Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt.

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 10 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor

Immediate AND surrounding land use: open space

Visible disturbances: None

Threats: Increased distribution and density of non-native grasses/annuals

Comments: Dry rocky slope

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-16
California Native Species Field Survey Form
File Name 02-LepVir_04152011

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): 04/15/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 10 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: undetrmnd Number UCR Herbarium Museum / Herbarium

Reporter: Teresa Salvato

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1204 feet above msl

T 5S R 5W Sec 16, NW 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.412609, 33.73666

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Encelia farinosa, Mirabilis laevis (Benth.) Curran, Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth, Allium haematochiton S. Wats.. Associates include Hemizonia kelloggii Greene, Bromus rubens L., Microseris lindleyi (DC.) Gray, Centaurea melitensis L..

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 20 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Possibly formerly grazed and roads

Threats: Increase in distribution and density of non-native grasses/annuals

Comments: Dry rocky hillside north of former horse track area

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-17
California Native Species Field Survey Form
File Name 03-LepVir_04122011

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): 04/12/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 20 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 20 % flowering 80 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1299 feet above msl
T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.411494, 33.736845

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Mirabilis laevis (Benth.) Curran, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt. Associates include Bromus rubens L., Rafinesquia californica Nutt., Euphorbia albomarginata T. & G., Erodium cicutarium (L.) L'Her. ex Ait..

Substrates/soil: Cobbly-Clay
Aspects/Slope: S, 40 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increased distribution and density of non-native grasses/annuals

Comments: Same small population observed in 2010 . Population located under Encelia farinosa shrubs on dry rocky south facing slope. Area of population c. 15 feet in diameter

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[ ] Other: _____

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-18
California Native Species Field Survey Form
File Name 04-LepVir_04112011

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): 04/11/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 70 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na [X] no [ ] unk.
Yes Occ. #

Collection? If yes: na Number; na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 80 % vegetative; 0 % flowering; 100 % fruiting

Animal Information
adults; # juveniles; # larvae; # egg masses; # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1233 feet above msl
T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.409576, 33.736646

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Prunus ilicifolia (Nutt.) Walp., Hemizonia kelloggii Greene, Lessingia filaginifolia (H. & A.) M.A. Lane, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Encelia farinosa. Associates include Sambucus mexicana Presl., Festuca myuros L., Centaurea melitensis L., Microseris lindleyi (DC.) Gray, Bromus rubens L.. Other dominant species include Bromus hordeaseus, Plagiobothrys collinus, Cryptantha intermedia, Avena barbata

Substrates/soil: Clay Loam
Aspects/Slope: SW, 7 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Illegal dumping

Threats: Additional dumping

Comments: Disturbed RSS. Population found near and within upland drainage

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[ ] Other: _____

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-19
California Native Species Field Survey Form
File Name 05-LepVir_04152011

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): 04/12/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 1000s Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: undetrmnd Number; UCR Herbarium Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative; 10 % flowering; 90 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1265 feet above msl

T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.41027, 33.737301

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Encelia farinosa, Artemisia californica Less.. Associates include Avena barbata Brot., Bromus rubens L., Hemizonia kelloggii Greene, Allium haematochiton S. Wats., Microseris lindleyi (DC.) Gray.

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 30 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increased distribution and densities of non-native grasses/annuals.

Comments: Population is significant and other smaller populations recorded within this larger occurrence. Most of pop growing within waist high Avena on cobbly soils. Pop was not observed in 2009 or 2010 surveys.

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

[X] Keyed (cite reference): T. Salvato has compared vouchers to Keys for Lepidium on 4/11

[X] Compared with specimen housed at: T. Salvato compared vouchered spe imens collecte

[ ] Compared with photo / drawing in: _____

[X] By another person (name):: T. Salvato

[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-20
California Native Species Field Survey Form
File Name 06-LepVir_04132011

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): 04/13/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 50 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1355 feet above msl

T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.409881, 33.738112

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Dichelostemma capitatum (Benth.) Alph. Wood, Encelia farinosa, Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth. Associates include Microseris lindleyi (DC.) Gray, Bromus rubens L., Cryptantha intermedia (Gray) Greene, Centaurea melitensis L., Avena fatua L..

Substrates/soil: Cobbly-Clay

Aspects/Slope: S, 30 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in distribution and density of non-native grasses/annuals

Comments: Population growing on south side of perennials (Erigonum), under plant and within large cobbles. Population diameter is c. 5 feet

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

- [ ] Keyed (cite reference): _____
- [X] Compared with specimen housed at: Vouchered specimen from site
- [ ] Compared with photo / drawing in: _____
- [ ] By another person (name):: _____
- [ ] Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-21
California Native Species Field Survey Form
File Name 07-LepVir_04132011

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): 04/13/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 100 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1368 feet above msl

T 5S R 5W Sec 16, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.409431, 33.738604

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Allium haematochiton S. Wats., Dichelostemma capitatum (Benth.) Alph. Wood. Associates include Avena fatua L., Bromus diandrus Roth, Bromus rubens L., Centaurea melitensis L., Cryptantha intermedia (Gray) Greene.

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 30 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increased non-native grass/annual distribution and density

Comments: Population growing in rocky clay patch surrounded by NNG species. Population is dense within the small clearing, approx 10 feet in diameter

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

- [ ] Keyed (cite reference): _____
- [X] Compared with specimen housed at: Vouchered specimen from site
- [ ] Compared with photo / drawing in: _____
- [ ] By another person (name):: _____
- [ ] Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-22
California Native Species Field Survey Form
File Name 08-LepVir_04212011

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): 04/21/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 12 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na [X] no [ ] unk.
Yes Occ. #

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1323 feet above msl
T 5S R 5W Sec 16, NE 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.406722, 33.7382

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Artemisia californica Less., Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Hemizonia fasciculata (DC.) Torr. & Gray, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt. Associates include Centaurea melitensis L., Bebbia juncea (Benth.) Greene, Bromus rubens L., Eschscholzia californica Cham..

Substrates/soil: Clay Loam
Aspects/Slope: SE, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space and rural residential

Visible disturbances: Abandoned residence, planted wind break vegetation, dump site

Threats: Increased distribution and density of non-native grasses/annuals

Comments: Population not observed during 2010 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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-23
California Native Species Field Survey Form
File Name 09-LepVir_04252011

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): 04/25/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 10 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 10 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1356 feet above msl

T 5S R 5W Sec 16, NE 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.402577, 33.738693

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Mirabilis laevis (Benth.) Curran, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Microseris lindleyi (DC.) Gray. Associates include Bromus rubens L., Avena barbata Brot., Centaurea melitensis L., Plantago erecta Morris, Cryptantha intermedia (Gray) Greene.

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 20 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space and rural residential

Visible disturbances: None

Threats: Increased distribution and density of non-native grasses/annuals

Comments: Population occurs north of an upland drainage in clay lens surrounded by NNG and RSS.

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T. salvato
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-24
California Native Species Field Survey Form
File Name 10-LepVir_04202011

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): 04/20/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 50 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 20 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1807 feet above msl

T 5S R 5W Sec 15, NW 1/4 of NW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.39791, 33.740513

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Eriogonum elongatum Benth., Bebbia juncea (Benth.) Greene, Mirabilis laevis (Benth.) Curran, Artemisia californica Less.. Associates include Bromus rubens L., Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Eschscholzia californica Cham., Avena barbata Brot., Dichelostemma capitatum (Benth.) Alph. Wood.

Substrates/soil: Cobbly-Clay

Aspects/Slope: SW, 10 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Possibly formerly grazed

Threats: Increase in non-native grass/annual distribution and density

Comments: Small population between shrubs, radius c. 30 ft

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-26
California Native Species Field Survey Form
File Name 11-LepVir_04212011

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): 04/21/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 50 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 5 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1732 feet above msl
T 5S R 5W Sec 9, SE 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.399386, 33.743976

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Mirabilis laevis (Benth.) Curran, Bebbia juncea (Benth.) Greene, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Phacelia cicutaria Greene var. hispida (Gray) J.T. Howell. Associates include Bromus rubens L., Avena barbata Brot., Brassica geniculata (Desf.) Ball, Eschscholzia californica Cham., Dichelostemma capitatum (Benth.) Alph. Wood.

Substrates/soil: Cobbly-Clay
Aspects/Slope: SE, 20 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in non-native grass/annual distribution and density

Comments: Population previously recorded in 2010; although more robust in 2011. Area of current pop is c. 50 feet in radius. Bulk of pop is near peak in rocky substrate and extends se into clay soils.

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-27
California Native Species Field Survey Form
File Name 12-LepVir_04202011

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): 04/20/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 1000 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 5 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1764 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.395973, 33.742629

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Lessingia filaginifolia (H. & A.) M.A. Lane, Eriogonum elongatum Benth., Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams. Associates include Bromus rubens L., Avena barbata Brot., Bromus hordeaceus L., Microseris lindleyi (DC.) Gray, Brassica geniculata (Desf.) Ball. Other dominant species include Filago californica

Substrates/soil: Cobbly-Clay
Aspects/Slope: NE, 20 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in non-native grass/annual distribution and density

Comments: Previously observed population in 2010. More robust this year.

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-28
California Native Species Field Survey Form
File Name 13-LepVir_04202011

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): 04/20/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 500 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 5 % flowering 100 % fruiting

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1596 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.39358, 33.74307

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Bebbia juncea (Benth.) Greene, Mirabilis laevis (Benth.) Curran, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Eschscholzia californica Cham.. Associates include Bromus rubens L., Euphorbia albomarginata T. & G., Erodium cicutarium (L.) L'Her. ex Ait., Avena barbata Brot., Microseris lindleyi (DC.) Gray. Other dominant species include Lotus scoparius

Substrates/soil: Cobbly-Clay
Aspects/Slope: SE, 30 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in non-native grass/annual distribution and density

Comments: Population previously recorded in 2010. Multiple photo points mark the polygon. Population observed on dry rocky SE facing slope. Upper third to ridge line

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-29
California Native Species Field Survey Form
File Name 14-LepVir_04212011

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): 04/21/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 20 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 50 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1574 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.393728, 33.743511

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Salvia mellifera Greene, Chaenactis glabriuscula DC., Bebbia juncea (Benth.) Greene. Associates include Bromus rubens L., Brassica geniculata (Desf.) Ball, Eschscholzia californica Cham., Centaurea melitensis L., Avena barbata Brot..

Substrates/soil: Sandy Clay Loam
Aspects/Slope: E, 40 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in non-native grass/annual distribution and density

Comments: Population growing on an east facing slope in a bare area with robust population of Chaeneactis. Soils unusually sandy compared to other observations of this species in regional area.

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-30
California Native Species Field Survey Form
File Name 15-LepVir_04192011

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): 04/19/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 150 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? na [X] no [ ] unk. (Yes Occ. #)
Collection? If yes: na (Number) na (Museum / Herbarium)

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 10 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1637 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.39343, 33.743996

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Eriogonum elongatum Benth., Bebbia juncea (Benth.) Greene, Bromus rubens L., Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt. Associates include Eschscholzia californica Cham., Microseris lindleyi (DC.) Gray, Mirabilis laevis (Benth.) Curran, Brassica geniculata (Desf.) Ball, Salvia columbariae Benth..

Substrates/soil: Clay Loam
Aspects/Slope: SE, 50 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: Open Space

Visible disturbances: Introduction on non-native grasses and annuals

Threats: Increased non-native grass/annual distribution and density

Comments: Drying population outside of that identified in previous year

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-31
California Native Species Field Survey Form
File Name 16-LepVir_04192011

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): 04/19/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 50 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1597 feet above msl

T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.391696, 33.743822

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Artemisia californica Less., Encelia farinosa, Mirabilis laevis (Benth.) Curran, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Bebbia juncea (Benth.) Greene. Associates include Bromus rubens L., Salvia columbariae Benth., Microseris heterocarpa (Nutt.) Chamb., Brassica geniculata (Desf.) Ball, Avena barbata Brot..

Substrates/soil: Clay Loam

Aspects/Slope: SE, 30 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Road cut northwest of population and litter associated with shooting targets

Threats: Increased non-native grass/annual distribution and density

Comments: Located upgradient and north of upland swale. Population size is approx. 20 feet in diameter. Individuals growing in open area amongst other annuals native/non-native.

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[ ]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [ ] no [ ]

Appendix F-32
California Native Species Field Survey Form
File Name 17-LepVir_04192011

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): 04/19/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 100-200 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Tim Searl

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1578 feet above msl

T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.391326, 33.7436

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Bowlesia incana Ruiz & Pavon, Bromus rubens L.. Associates include Avena barbata Brot., Mirabilis laevis (Benth.) Curran, Centaurea melitensis L.. Other dominant species include na

Substrates/soil: Loam

Aspects/Slope: S, 30 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Increased non-native grass/annual distribution and density

Comments:

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T. Salvato
- [ ] Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-33
California Native Species Field Survey Form
File Name 18-LepVir_04062011

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): 04/06/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 50 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 40 % flowering 60 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1612 feet above msl
T 5S R 5W Sec 10, SW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.390994, 33.744104

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Artemisia californica Less., Encelia farinosa, Mirabilis laevis (Benth.) Curran. Associates include Lepidium nitidum Nutt., Avena barbata Brot., Bromus rubens L., Erodium cicutarium (L.) L'Her. ex Ait., Chaenactis artemisiifolia (Harv. & Gray ex Gray) Gray.

Substrates/soil: Cobbly-Clay
Aspects/Slope: E, 25 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: Open Space

Visible disturbances: None

Threats: None

Comments: Located upgradient of small drainage within cobbly soils

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[X] Compared with specimen housed at: L. nitidum
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[ ] Other: _____

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-34
California Native Species Field Survey Form
File Name 19-LepVir_04192011

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): 04/19/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 50 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 5 % flowering 95 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1532 feet above msl

T 5S R 5W Sec 15, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.391679, 33.741941

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Artemisia californica Less., Bebbia juncea (Benth.) Greene, Encelia farinosa, Eriogonum elongatum Benth., Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley. Associates include Euphorbia polycarpa Benth., Bromus rubens L., Avena barbata Brot., Salvia columbariae Benth., Rhus laurina Nutt..

Substrates/soil: Cobbly-Clay

Aspects/Slope: S, 25 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increased non-native grass/annual distribution and density

Comments: Population growing on northern bank of scream. Very rocky area.

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T. Salvato
- [ ] Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-35
California Native Species Field Survey Form
File Name 20-LepVir_04192011

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): 04/19/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 25 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na [X] no [ ] unk.
Yes Occ. #

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1526 feet above msl

T 5S R 5W Sec 15, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.39112, 33.741366

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Artemisia californica Less., Eriogonum elongatum Benth., Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth, Bebbia juncea (Benth.) Greene, Mirabilis laevis (Benth.) Curran. Associates include Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Bromus rubens L., Microseris lindleyi (DC.) Gray, Daucus pusillus Michx., Euphorbia albomarginata T. & G..

Substrates/soil: Cobbly-Clay

Aspects/Slope: NW, 20 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Possibly formerly grazed and roadway

Threats: Grading of roadway

Comments: Shelf above permanent riparian corridor

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-36
California Native Species Field Survey Form
File Name 21-LepVir_04182011

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): 04/18/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 60 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 10 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1584 feet above msl

T 5S R 5W Sec 15, NE 1/4 of NW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.38803, 33.741923

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Artemisia californica Less., Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Microseris lindleyi (DC.) Gray. Associates include Bromus hordeaceus L., Bromus rubens L., Avena barbata Brot., Erodium cicutarium (L.) L'Her. ex Ait..

Substrates/soil: Clay Loam

Aspects/Slope: S, 8 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in distribution/density of non-native grasses/annuals

Comments: Population occurs within dense grassland on northern bank of east/west trending swale. Population radius is approx. 20 feet

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T Salvato
- [ ] Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-37
California Native Species Field Survey Form
File Name 22-LepVir_04182011

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): 04/18/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 300 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: undetrmnd Number; UCR Herbarium Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative; 30 % flowering; 100 % fruiting

Animal Information
_____ # adults; _____ # juveniles; _____ # larvae; _____ # egg masses; _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Public
Quad Name:9 Alberhill Elevation: 1599 feet above msl
T 5S R 5W Sec 10, SE 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: NAD27 [ ] NAD83 [X] WGS84 [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.387946, 33.742261

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Avena barbata Brot., Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Mirabilis laevis (Benth.) Curran, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth. Associates include Eschscholzia californica Cham., Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Microseris heterocarpa (Nutt.) Chamb., Daucus pusillus Michx., Hemizonia fasciculata (DC.) Torr. & Gray.

Substrates/soil: Cobbly-Clay
Aspects/Slope: E, 15 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Possibly formerly grazed

Threats: Increased distribution and density of non-native grasses/annuals

Comments: Robust population on clay lens areas in NNG

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-38
California Native Species Field Survey Form
File Name 23-LepVir_04182011

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): 04/18/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 50 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 10 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Public
Quad Name:9 Alberhill Elevation: 1600 feet above msl
T 5S R 5W Sec 10, SE 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.387728, 33.742213

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Mirabilis laevis (Benth.) Curran, Artemisia californica Less., Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Microseris heterocarpa (Nutt.) Chamb.. Associates include Bromus rubens L., Bromus hordeaceus L., Avena barbata Brot., Pectocarya recurvata Jtn., Eschscholzia californica Cham..

Substrates/soil: Cobbly-Clay
Aspects/Slope: SE, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in density and distribution of non-native grasses/annuals.

Comments: Lepidium population occurs within a dense population of NNG on SE facing slope from small upland drainage to the SE to upland areas NW. Population radius is approx. 20 x 10 feet

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[ ] Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-39
California Native Species Field Survey Form
File Name 24-LepVir_04182011

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): 04/18/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 150 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 20 % flowering 100 % fruiting

Animal Information
adults # juveniles # larvae # egg masses # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1478 feet above msl
T 5S R 5W Sec 15, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.391507, 33.740662

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Mirabilis laevis (Benth.) Curran, Bebbia juncea (Benth.) Greene, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Bromus rubens L.. Associates include Avena barbata Brot., Microseris lindleyi (DC.) Gray, Eschscholzia californica Cham., Filago californica Nutt..

Substrates/soil: Cobbly-Clay
Aspects/Slope: SE, 15 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open Space

Visible disturbances: None

Threats: Increased distribution and density of non-native grasses/annuals

Comments: Population growing on dry south-southeast facing slope dominated by encelia. Population growing under and within open spaces between native perennials. Upgradient and northwest of stream.

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-40
California Native Species Field Survey Form
File Name 25-LepVir_04192011

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): 04/19/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 50 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1538 feet above msl

T 5S R 5W Sec 15, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.391449, 33.739031

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Avena barbata Brot., Eriogonum elongatum Benth., Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Encelia farinosa, Bebbia juncea (Benth.) Greene. Associates include Mirabilis laevis (Benth.) Curran, Filago californica Nutt., Eschscholzia californica Cham., Rafinesquia californica Nutt., Euphorbia albomarginata T. & G.. Other dominant species include Bromus rubens

Substrates/soil: Cobbly-Clay

Aspects/Slope: S, 30 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open Space and unimproved road

Visible disturbances: Previous grading of access roads

Threats: Increased distribution and density of non-native grasses/annuals

Comments: Population occurs on relative flat rocky area on south facing slope above Lake Street (dirt road). Population radius is approx 40 feet.

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

- [ ] Keyed (cite reference): _____
- [ ] Compared with specimen housed at: _____
- [ ] Compared with photo / drawing in: _____
- [X] By another person (name):: T. Salvato
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-41
California Native Species Field Survey Form
File Name 27-LepVir_06062011

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): 06/06/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 50 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1239 feet above msl
T 5S R 5W Sec 16, SW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.409594, 33.734146

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Hemizonia kelloggii Greene, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Mirabilis laevis (Benth.) Curran, Galium angustifolium Nutt. ssp. angustifolium. Associates include Brassica geniculata (Desf.) Ball, Centaurea melitensis L., Eschscholzia californica Cham.. Other dominant species include na

Substrates/soil: Clay Loam
Aspects/Slope: SW, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Recently burned c. Fall 2010

Threats: Spread and increased density of non-native grass and annuals

Comments: Rocky clay loam, recently burned (Fall 2010). Primarily non-native annuals, but native perennials recovering.

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-42
California Native Species Field Survey Form
File Name 28-LepVir_05262011

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): 05/26/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 10 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: no Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1274 feet above msl

T 5S R 5W Sec 16, NW 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.413273, 33.738038

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Hemizonia kelloggii Greene, Encelia farinosa, Mirabilis laevis (Benth.) Curran, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt. Associates include Centaurea melitensis L., Avena barbata Brot.. Other dominant species include na

Substrates/soil: Clay Loam

Aspects/Slope: S, 45 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Increased density and distribution of non-native grasses and annuals

Comments: Dry plants, fruit and pedicle present. Pop located within densely vegetated hillside above former horse ranch area.

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-43
California Native Species Field Survey Form
File Name 29-LepVir_05262011

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): 05/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 10 Subsequent Visit? [ ] yes [X] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1372 feet above msl
T 5S R 5W Sec 16, NW 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.412514, 33.737942

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Mirabilis laevis (Benth.) Curran, Encelia farinosa, Salvia apiana Jeps.. Associates include Avena barbata Brot., Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Centaurea melitensis L., Bromus madritensis L. ssp. rubens (L.) Husnot. Other dominant species include na

Substrates/soil: Clay Loam
Aspects/Slope: SW, 30 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Increased density and distribution of non-native grasses and annuals

Comments: Population occurs near base of ridgeline of steep hill above former ranch area.

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-44
California Native Species Field Survey Form
File Name 30-LepVir_05262011

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): 05/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No If not, why? _____

Total No. Individuals 20 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1346 feet above msl
T 5S R 5W Sec 16, NW 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.41217, 33.737349

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Encelia farinosa, Salvia apiana Jeps., Mirabilis laevis (Benth.) Curran, Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt. Associates include Avena barbata Brot., Centaurea melitensis L., Stephanomeria virgata Benth. ?, Bromus trinii Desv., Bromus madritensis L. ssp. rubens (L.) Husnot. Other dominant species include n/a

Substrates/soil: Clay Loam
Aspects/Slope: SW, 45 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Former horse ranch

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Increased density and distribution of non-native grasses and annuals

Comments: Small dried population

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-45
California Native Species Field Survey Form
File Name 31-LepVir_06062011

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): 06/06/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 100 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1311 feet above msl

T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.408129, 33.735569

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Encelia farinosa, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley. Associates include Bromus madritensis L. ssp. rubens (L.) Husnot, Plantago erecta Morris. Other dominant species include na

Substrates/soil: Cobbly-Clay

Aspects/Slope: SE, 20 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Spread and increased density of non-native grass and annuals

Comments: Eriogonum dominant SE facing hillside. Cobbly substrate. Population observed in open areas and in under story of native perennials.

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):: _____
- [X] Other: Sight recognition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-46
California Native Species Field Survey Form
File Name 32-LepVir_05262011

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): 05/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 6 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1365 feet above msl
T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.410295, 33.73826

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Encelia farinosa, Hemizonia fasciculata (DC.) Torr. & Gray, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Avena barbata Brot.. Associates include Croton setiger Hook., Stephanomeria virgata Benth. ?, Centaurea melitensis L., Microseris lindleyi (DC.) Gray, Euphorbia albomarginata T. & G.. Other dominant species include n/a

Substrates/soil: Clay Loam
Aspects/Slope: SE, 20 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Increased density and distribution of non-native grasses and annuals

Comments: Drying population

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-47
California Native Species Field Survey Form
File Name 33-LepVir_05262011

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): 05/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 450 Subsequent Visit? [X] yes [ ] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1368 feet above msl
T 5S R 5W Sec 16, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.409572, 33.738499

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Mirabilis laevis (Benth.) Curran, Avena barbata Brot., Hemizonia fasciculata (DC.) Torr. & Gray, Centaurea melitensis L.. Associates include Bromus madritensis L. ssp. rubens (L.) Husnot, Cylindropuntia californica (Torr. & A. Gray) F. M. Knuth, Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Cryptantha intermedia (Gray) Greene, Dichelostemma capitatum (Benth.) Alph. Wood. Other dominant species include n/a

Substrates/soil: Cobbly-Clay
Aspects/Slope: SE, 25 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [X] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals, dogs

Threats: Increase in non-native grass/annual density/distribution

Comments: Population observed on rocky SE facing slope in open area between native perennials and growing amongst native/non-native annuals.

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):: _____
[X] Other: Sight Recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-48
California Native Species Field Survey Form
File Name 34-LepVir_05262011

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): 05/26/2011

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

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 25 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1352 feet above msl
T 5S R 5W Sec 16, NW 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.408547, 33.738409

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Hemizonia fasciculata (DC.) Torr. & Gray, Encelia farinosa. Associates include Bromus madritensis L. ssp. rubens (L.) Husnot, Centaurea melitensis L., Avena fatua L.. Other dominant species include na

Substrates/soil: Clay
Aspects/Slope: SE, 25 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Introduction of non-native grasses and annuals

Threats: Increased density and distribution of non-native grasses and annuals

Comments: Observed population occurs within and along edges of clay lens within dense non-native grasses. Some RSS components present. Pop area is c. 10'x10'

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):: _____
[X] Other: Sight recognition

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-49
California Native Species Field Survey Form
File Name 35-LepVir_05312011

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): 05/31/2011

For Office Use Only

Source Code _____ Quad Code _____

Elm Code _____ Occ. No. _____

EO Index No. _____ Map Index No. _____

California Native Species Field Survey Form

Scientific Name: *Lepidium virginicum var. robinsonii*

Common Name: Robinson's peppergrass

Species Found? [X] Yes [ ] No _____ If not, why?

Total No. Individuals 10 Subsequent Visit? [ ] yes [X] no

Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.

Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle

Address: AECOM, 901 Via Piemonte, 5th Floor

Ontario, CA 91764

E-mail Address: matthew.malle@aecom.com

Phone: 909.579.3561

Plant Information

Phenology: 0 % vegetative 0 % flowering 100 % fruiting

Animal Information

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

[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private

Quad Name:9 Alberhill Elevation: 1688 feet above msl

T 5S R 5W Sec 10, SW 1/4 of SW 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS

T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB

DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet

Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]

Coordinates: -117.395747, 33.743334

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Eriogonum elongatum Benth., Mirabilis laevis (Benth.) Curran, Microseris lindleyi (DC.) Gray. Associates include Avena barbata Brot.. Other dominant species include na

Substrates/soil: Clay Loam

Aspects/Slope: N, 35 %

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor

Immediate AND surrounding land use: Open space

Visible disturbances: Hillside dominated by Avena barbata

Threats: Increase in non-native grass/annual density/distribution

Comments: Population occurs on north facing steep slope dominated by non-native grasses

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):: _____
- [X] Other: Sight reconition

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-50
California Native Species Field Survey Form
File Name 01-MicroDoug_04062011

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): 04/13/2011

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

California Native Species Field Survey Form

Scientific Name: *Microseris douglasii var. platycarpha*

Common Name: small-flowered microseris

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 7 Subsequent Visit? [ ] yes [X] no
Is this an existing NDDB occurrence? na [X] no [ ] unk. (Yes Occ. #)
Collection? If yes: na (Number) na (Museum / Herbarium)

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 100 % flowering 100 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1373 feet above msl
T 5S R 5W Sec 16, NW 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.410509, 33.738596

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Non-Native Grasslands. Dominants include Avena barbata Brot., Eriogonum fasciculatum Benth. var. foliolosum (Nutt.) S. Stokes ex Abrams, Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Artemisia californica Less., Hemizonia kelloggii Greene. Associates include Cryptantha intermedia (Gray) Greene, Bromus rubens L., Chorizanthe polygonoides var. longispina (Goodman) Munz, Plantago erecta Morris, Pectocarya linearis (R. & P.) DC..

Substrates/soil: Cobbly-Clay
Aspects/Slope: SW, 10 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [ ] Good [ ] Fair [X] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: Unimproved dirt road

Threats: Road use

Comments:

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[X] Compared with specimen housed at: measured pappus scales
[ ] Compared with photo / drawing in: _____
[ ] By another person (name):: _____
[ ] Other: _____

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-51
California Native Species Field Survey Form
File Name 01-RomCo_06032011

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): 06/03/2011

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

California Native Species Field Survey Form

Scientific Name: *Romneya coulteri*

Common Name: Coulter's matilijia poppy

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 30 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 90 % flowering 10 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Alberhill Elevation: 1357 feet above msl
T 5S R 5W Sec 16, NE 1/4 of NE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.402289, 33.739318

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Southern Willow Scrub. Dominants include Salix gooddingii Ball., Salix laevigata Bebb, Salix lasiolepis Benth., Salvia apiana Jeps., Artemisia californica Less.. Associates include Calystegia macrostegia (Greene) Brummitt ssp. arida (Greene) Brummitt, Bromus madritensis L. ssp. rubens (L.) Husnot. Other dominant species include Bebbia juncea, Encelia farinosa, Sambucus mexicana.

Substrates/soil: Clay Loam
Aspects/Slope: NE, 20 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [X] Excellent [ ] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space

Visible disturbances: None

Threats: Increase in non-native grass/annual density /distribution

Comments: This entire polygon is made up of ~30 separate clumps. Entire population occurs on steep wall of southern bank within a mix of RSS and SWS habitat.

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition, smooth buds

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-52
California Native Species Field Survey Form
File Name 02-RomCo_06022011

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): 06/02/2011

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

California Native Species Field Survey Form

Scientific Name: *Romneya coulteri*

Common Name: Coulter's matilijia poppy

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 1 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Matt Malle
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 90 % flowering 10 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Lake Mathews Elevation: 1711 feet above msl
T 5S R 5W Sec 9, NE 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.402487, 33.751935

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Southern Sycamore Riparian Woodland. Dominants include Platanus racemosa Nutt., Baccharis salicifolia (Ruiz & Pav≤n) Pers., Sambucus mexicana Presl., Urtica dioica L., Rhus laurina Nutt.. Associates include Mimulus guttatus DC., Brassica tournefortii Gouan., Centaurea melitensis L., Bromus madritensis L. ssp. rubens (L.) Husnot, Stachys. Other dominant species include Nasturtium, Mimulus guttatus, Toxicodendron diversilobum

Substrates/soil: Clay Loam
Aspects/Slope: NE, 5 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space and adjacent to access road

Visible disturbances: Adjacent to dirt access roads

Threats: Widening of dirt access road and increase in non-native grass/annual density/distribution

Comments: Population is clonal. Area population occupies is approx. 40' n-s and 20' e-w.

Determination: *(check one or more, and fill in blanks)*
[ ] Keyed (cite reference): _____
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name):: T. Salvato
[X] Other: Sight recognition, smooth buds.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	[ ]	[ ]	[X]
Habitat	[ ]	[ ]	[ ]
Diagnostic feature	[ ]	[ ]	[ ]

May we obtain duplicates at our expense? yes [X] no [ ]

Appendix F-53
California Native Species Field Survey Form
File Name 03-RomCo_06022011

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): 06/02/2011

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

California Native Species Field Survey Form

Scientific Name: *Romneya coulteri*

Common Name: Coulter's matilijia poppy

Species Found? [X] Yes [ ] No _____ If not, why?
Total No. Individuals 20 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? na Yes Occ. # [X] no [ ] unk.
Collection? If yes: na Number na Museum / Herbarium

Reporter: Teresa Salvato
Address: AECOM, 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matthew.malle@aecom.com
Phone: 909.579.3561

Plant Information
Phenology: 0 % vegetative 90 % flowering 10 % fruiting

Animal Information
_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown
[ ] breeding [ ] wintering [ ] burrow site [ ] rookery [ ] nesting [ ] other

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

County: Riverside Landowner / Mgr.: Private
Quad Name:9 Lake Mathews Elevation: 1775 feet above msl
T 5S R 5W Sec 9, NE 1/4 of SE 1/4, Meridian: H[ ] M[ ] S[X] Source of Coordinates (GPS, topo. map & type): GPS
T ___ R ___ Sec ___, ___ 1/4 of ___ 1/4, Meridian: H[ ] M[ ] S[ ] GPS Make/Model Juno Trimble SB
DATUM: **NAD27** [ ] **NAD83** [X] **WGS84** [ ] Horizontal Accuracy 2 meters/feet
Coordinate System: UTM Zone 10 [ ] UTM Zone 11 [ ] ***OR*** Geographic (Latitude & Longitude) [X]
Coordinates: -117.40309, 33.752315

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*
Plant communities/dominants/associates: Riversidean Sage Scrub. Dominants include Rhus laurina Nutt., Lotus scoparius (Nutt.) Ottley var. brevialatus Ottley, Malacothamnus fasciculatus (Nutt.) Greene, Penstemon spectabilis Thurb. ex Gray, Eriogonum elongatum Benth.. Associates include Bromus madritensis L. ssp. rubens (L.) Husnot, Cryptantha intermedia (Gray) Greene, Festuca myuros L., Centaurea melitensis L.. Other dominant species include na

Substrates/soil: Clay Loam
Aspects/Slope: NE, 15 %
Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): [ ] Excellent [X] Good [ ] Fair [ ] Poor
Immediate AND surrounding land use: Open space and utility access

Visible disturbances: Adjacent to access road above road cut

Threats: Road widening

Comments: Clonal populations. Multiple at waypoint and several other smaller populations observed NW/N/NE waypoint.

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):: _____
[X] Other: Sight recognition, smooth buds.

Photographs: *(check one or more)* Slide Print Digital
Plant / animal [ ] [ ] [X]
Habitat [ ] [ ] [ ]
Diagnostic feature [ ] [ ] [ ]
May we obtain duplicates at our expense? yes [X] no [ ]

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DRAFT
ALBERHILL SYSTEM PROJECT
LEAST BELL'S VIREO AND SOUTHWESTERN WILLOW FLYCATCHER SURVEY REPORT

SOUTHERN CALIFORNIA EDISON®
An *EDISON INTERNATIONAL*® Company

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MONROVIA, CA 91016

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(909) 579-3561

AUGUST 2011

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List of Acronyms

CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
FP	Fully Protected species
kV	kiloVolt
LBV	least Bell's vireo
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MVA	Mega Volt Ampere
NCCP	Natural Communities Conservation Act
NEPA	National Environmental Policy Act
NEPSA	Narrow Endemic Plant Survey Area
SCE	Southern California Edison
SSC	California Species of Special Concern
SWF	southwestern willow flycatcher
Sub	subtransmission
T/L	transmission line
USFWS	U.S. Fish and Wildlife Service
WIFL	willow flycatcher

1.0 INTRODUCTION

This report summarizes the results of a focused survey completed by AECOM for the Alberhill System Project (Project), in Riverside County, California. The surveys were conducted for two federally and state listed riparian bird species known to breed in the southern California region, the least Bell's vireo (*Vireo bellii pusillus*) (LBV) and the southwestern willow flycatcher (*Empidonax traillii extimus*) (SWF). The surveys for both species were performed concurrently and were completed between April 18 and July 26, 2011. The surveys were performed to satisfy requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), under which LBV and SWF are considered covered species. The surveys followed protocol established for these species by the U.S. Fish and Wildlife Service (USFWS). This was the second consecutive year that a focused LBV/SWF survey was conducted by AECOM for the Project.

1.1 Project Description

Southern California Edison Company (SCE) proposes to construct the Project to serve current and projected demand for electricity and maintain electric system reliability in southwestern Riverside County (Figure 1). The Project is located in the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar, as well as the surrounding unincorporated areas.

The Project Area (or Survey Area) is defined as the area analyzed for the following Project components: the proposed Alberhill Substation, the proposed 500-kiloVolt (kV) transmission lines (T/L), the proposed 115-kV Subtransmission (Sub) T/L, and the alternative 115-kV Sub T/L (Figures 2 and 3).

- The proposed Alberhill Substation would be an unstaffed, automated 1,120-Mega Volt Ampere (MVA) 500/115-kV substation with an ultimate build-out of 1,680 MVA. Based on the preliminary design, approximately 8,000 cubic yards of soil, vegetation, and rock would be removed from the site (area of anticipated direct impact). In addition, approximately 10,320 cubic yards of soil would be removed as a result of excavation for foundation and building footings. Demolition of the existing horse ranch and relocation of a 30-inch gravity agricultural water line (owned and operated by Elsinore Valley Municipal Water District) would be required prior to mass grading. The horse ranch and adjacent undeveloped areas compose the Alberhill Substation survey area.

- The proposed 500-kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the 500-kV T/L include the following: the proposed N3 500-kV transmission line (N3 survey area [to the Alberhill Substation]), the proposed C1 500-kV transmission line (C1 survey area [from the Alberhill Substation]), and the existing Serrano-Valley 500-kV T/L (Existing 500-kV T/L alignment). Collectively, all three of these areas, as well as the proposed pull and tensioning locations, are referred to as the 500-kV T/L survey area. The 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the proposed and existing 500-kV T/L) around each of the 500-kV T/L project components.

- The alternative 500-kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the alternative 500-kV T/L include the following: the alternative SA 500-kV transmission line (SA survey area [to the Alberhill Substation]) and the alternative VA 500-kV transmission line (VA survey area [from the

Alberhill Substation]). Both of these survey areas, as well as the alternative pull and tensioning locations, are referred to as the alternative 500-kV T/L survey area. The alternative 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the alternative and existing 500-kV T/L) around each of the 500-kV T/L project components.

- The proposed 115-kV Sub T/L would consist of a new 115-kV Sub T/L and modification of the existing 115-kV Sub T/L. The 115-kV Sub T/L would transfer electrical service of five existing 115/12-kV substations (Ivyglen, Fogarty, Elsinore, Skylark, and Newcomb substations) to the new 500/115-kV Alberhill Substation. A Western Riverside County Narrow Endemic Plant Survey Area (NEPSA) identified along the 115-kV Sub T/L composes the 115-kV Sub T/L survey area. The area analyzed for the 115-kV Sub T/L survey area encompasses a 400-foot wide corridor (200 feet on either side of the 115-kV Sub T/L) around the 115-kV Sub T/L project components.

- An alternative to the proposed 115-kV Sub T/L has also been analyzed (alternative 115-kV Sub T/L). This alternative consists of an optional routing of the eastern portion of the proposed 115-kV Sub T/L.

The surveys investigated all areas with potentially suitable habitat for LBV and SWF that are anticipated to be directly or indirectly impacted by the proposed Project. The survey areas included a biological buffer area of at least 200 feet around the Project's direct limits of disturbance. The elevation of the various survey areas investigated ranged from a low of 1,180 feet to a high of 1,772 feet above mean sea level. Figures 2 and 3 and Appendix B, Figures B-1 through B-9, show, respectively, the Project's regional location and specific LBV and SWF survey locations.

1.2 Species Accounts

Least Bell's Vireo

The least Bell's vireo is one of four subspecies of Bell's vireo, a small, insectivorous, migratory songbird. The breeding range of LBV is currently restricted to southwestern California and northwestern Baja California, although it historically bred extensively into the Central Valley of California (USFWS 1998). It is thought to winter primarily in southern Baja California. Loss and degradation of breeding habitat and brood parasitism by the brown-headed cowbird (*Molothrus ater*) are considered major factors resulting in the decline of the LBV population in California. Habitat conversion for agricultural and development have removed much of the riparian woodlands required for nesting by LBV and other riparian-dependent birds. Flood control measures and channelization have also depleted important habitat for riparian species. Grazing by cattle has impacted habitat suitability by removing or thinning the understory vegetation required by many riparian nesting birds, including LBV. Additionally, the presence of livestock generally leads to increased cowbird populations and, in turn, increased pressure from brood parasitism in local songbird populations.

The significant reduction in the population size and range of LBV resulted in its listing by the California Department of Fish and Game (CDFG) as endangered in June 1980 and by the USFWS as endangered in May 1986. Since the early 1990s, however, many LBV populations have demonstrated fairly significant growth, especially those having received conservation and management efforts. Census data from 1986 indicated an estimated 300 pairs in southern California, but by 2000 the estimate had risen to a total of 2,000 pairs (USFWS 2001). More recent data show California's statewide population was estimated to be approximately 3,000 territorial males in 2008 (Kus et al. 2010). Extensive cowbird trapping and habitat restoration are presumed to be the primary

factors contributing to this recent recovery trend. LBV has been reoccupying large portions of its former range in southern California, and in 2005 a pair of LBV successfully bred in the San Joaquin Valley, the first such occurrence in this part of its former range in over 50 years (PRBO 2009).

The LBV prefers riparian habitat with a dense understory of young willows (*Salix* spp.), mulefat (*Baccharis salicifolia*), Mexican elderberry (*Sambucus mexicana*), California rose (*Rosa californica*), mugwort (*Artemisia douglasiana*), poison oak (*Toxicodendron diversilobum*), desert wild grape (*Vitis girdiana*), and a variety of other shrub and groundcover species (Kus 2002; Kus et al. 2010). The LBV is generally found in riparian areas that are dominated by one or more willow species, especially where a mixed-age composition occurs. These areas frequently include other trees such as cottonwood (*Populus* spp.) or California sycamore (*Platanus racemosa*), particularly where the canopy is within or immediately adjacent to an understory layer of vegetation (Salata 1983). One analysis indicated that LBV prefers stratified vegetation, with low amounts of aquatic and herbaceous cover (RECON 1990). Another ecological variable is the width of the willow riparian woodland. LBVs exhibit a clear preference for relatively broad woodlands, which typically exhibit more stratification of vegetation. It was noted that an increase in occupied habitat occurs as the width of the willow riparian woodland exceeds 50 meters wide versus 10 meters or less (RECON 1990). As local populations continue to expand, and occupy the remaining areas of more typical habitat, a higher incidence of LBV using lower quality or "marginal" habitats becomes apparent.

The core of the LBV range in southern California has been in San Diego County, especially while populations were at their lowest known levels during the 1980s. Although this county continues to support several significant populations, another substantial population has been in the Prado Basin area in western Riverside County (approximately 25 miles northwest of Lake Elsinore). In the greater Prado Basin area, a total of 538 LBV territories were recorded in 2009 (pers. comm., Jim Pike). The Santa Ana River upstream and downstream of Prado Basin has also been known to support increasing numbers of LBV in recent years. Although many local populations have apparently leveled off in recent years (such as in San Diego County and Prado Basin), this may be a result of areas with suitable habitat reaching saturation levels of LBV (pers. comm., Jim Pike).

Southwestern Willow Flycatcher

The southwestern willow flycatcher is a small, olive-colored, migratory songbird. One of four commonly recognized subspecies of the willow flycatcher, the SWF was listed as a federally endangered species by the USFWS in March 1995. In addition, all willow flycatcher subspecies that nest in California (including SWF and two other subspecies in northern California) are considered state endangered by CDFG. The breeding range of SWF includes southern California, Arizona, New Mexico, southwestern Colorado, extreme southern portions of Nevada and Utah, and (possibly) western Texas (Sogge et al. 1997). As with other willow flycatcher subspecies, its winter range occurs south of the United States. Throughout its range, the SWF is one of the latest migratory species to arrive on its breeding grounds (Garrett and Dunn 1981). In southern California, it is present from early to mid May through August and possibly early September.

The identification of SWF in the field is quite difficult due to its close resemblance to other flycatcher species in the *Empidonax* genus. In addition, due to extreme similarity of appearance and vocalizations, it is not possible to positively identify the various willow flycatcher (WIFL) subspecies in the field. Populations of other subspecies of WIFL (e.g., *E.t. brewsteri* and *E.t. adastus*, which breed as far north as southwestern Canada) are apparently maintaining stable populations. They are widespread during migration and can be encountered at this time in SWF breeding habitat, as well as in a variety of other native and nonnative habitats (Garrett and Dunn 1981; Hamilton and Willick

1996). In fact, at the species level, WIFLs occur as fairly common migrants in southern California, although these birds are all assumed to belong to the more common, northerly-breeding subspecies. It is currently recognized, however, that the SWF subspecies is the only one known to breed in southern California. Consequently, SWF surveys extend through the breeding season to differentiate the SWF from other, purely migratory subspecies of willow flycatcher. The survey protocol's increased frequency of site visits between June 20 and July 17 is intended to increase the likelihood of detecting any SWF that may be present in a survey area, at a time when no other WIFL subspecies is expected to be present in southern California.

Breeding habitat for SWF is restricted to dense, well-developed riparian woodland, from sea level in California to approximately 8,000 feet in Arizona. Typically this habitat occurs near surface water or saturated soil (Sogge et al. 1997). Sogge et al. (1997) suggest that nesting habitat for SWF typically includes patches at least two acres or greater in extent, with linear-shaped habitats at least 10 meters (33 feet) wide. Specific habitat characteristics, such as species composition and diversity, dominant vegetation, and vegetative structure, have been found to be quite varied. For many years, SWF breeding habitat in California was thought to be generally limited to willow-dominated riparian communities (Garrett and Dunn 1981; Grinnell and Miller 1944). In southern California, however, more recent work (e.g., Robert McKernan, Bill Haas) has revealed this species occasionally occupying habitats dominated by alders (*Alnus rhombifolia*), coast live oak (*Quercus agrifolia*), and other species. Along the lower Colorado River, salt cedar (*Tamarix ramosissima*) dominated habitats are known to support substantial numbers of SWF breeding territories (McKernan and Braden 1999).

Historically, the SWF was considered a common summer resident in appropriate habitat throughout the state of California (Grinnell and Miller 1944). In recent decades, however, this taxon experienced significant population declines. In 1997, the known breeding population was estimated at between 300 and 500 pairs, with only a small percentage of this total occurring in California (Sogge et al. 1997). More recently, a range-wide assessment of the SWF, conducted in 2007, estimated its population at 1,299 territories (USFWS 2011). During this time, however, the California population has shown no evidence of improvement, and in general has declined. Similar to LBV, the SWF's decline throughout its range is widely attributed to habitat loss, habitat degradation, and brood parasitism by the brown-headed cowbird.

2.0 METHODS

The survey protocol for SWF and LBV followed guidelines provided for these species by the USFWS. For projects that may impact potential SWF habitat, SWF survey protocol, as revised in 2010, specifies a total of five site visits to areas of potential SWF habitat. These visits are to be conducted during three consecutive time periods, with successive surveys at any site at least five days apart. The three time periods identified for SWF surveys are as follows: Survey Period One: May 15 through 31; Survey Period Two: June 1 through 24; and Survey Period Three: June 25 through July 17. A minimum of one survey is to be conducted during Survey Period One, with a minimum of at least two surveys during Survey Periods Two and Three. Four of the site visits are conducted during the last two survey periods, as this is the best period to verify the summer resident status of SWF and eliminate the possibility of strictly transient (in southern California) subspecies of WIFL. As stated above, other subspecies of WIFL pass through the breeding range of SWF during spring and fall migration but do not breed in the region.

Guidelines adopted by the USFWS for LBV surveys specify 8 visits between April 10 and July 31, with a minimum of 10-day intervals between site visits. The protocol for LBV requires a maximum survey area per biologist per day of 3 linear kilometers (1.86 miles) or 50 hectares (123 acres). The combined acreages and linear distances of all LBV/SWF survey areas for the Project was less than these recommended daily survey limits. Combining protocol survey recommendations for both the SWF and LBV necessitates a total of nine site visits, with the visits conducted between April 10 and July 31.

For the SWF, survey protocol requires that SWF song recordings be broadcast at regular intervals in areas of suitable habitat to optimize the potential for the detection of this species. Due to the potential for these recordings to adversely impact nesting activity and the difficulty in finding and identifying SWF, USFWS requires that the surveying biologist be in possession of a current endangered species [Section 10(a)(1)(A)] permit that authorizes survey activities for SWF. No endangered species permit is required to conduct surveys for LBV, and the use of song recordings is not required for this species. All surveys were performed by AECOM avian biologist Doug Willick, who is permitted to conduct presence/absence surveys for SWF and to conduct nest checks for LBV (permit #TE-821404-5).

Surveys were performed by slowly walking through, or along, all areas of suitable habitat for LBV and SWF and stopping and listening periodically to detect song and/or other vocalizations. One survey area (the portion of Temescal Creek extending north of Temescal Canyon Road), due to private property issues, was surveyed from the west edge of the Alberhill Substation property. Thus the identification of LBV for this particular area was limited to aural detection methods. Surveys were conducted primarily during morning hours and were restricted to early morning hours for all areas that were surveyed for SWF. The surveys avoided weather conditions (e.g., excessive wind, heat, rain, fog) that would not be conducive to the detection of LBV and SWF or small songbirds in general. Table 1, below, identifies the survey dates, time of day during which the survey was conducted, and the weather conditions during the survey.

During the performance of the LBV/SWF survey, attention was also given to other special status riparian birds that had potential to be present with the Project's survey areas. Based on habitat present in at least portions of the survey areas, other special status riparian birds with some potential to occur include yellow warbler (*Setophaga petechia*) and yellow-breasted chat (*Icteria virens*). These species are considered by CDFG to be California Species of Special Concern. A compendium of all bird species recorded during this focused riparian bird survey is included at the end of this report (Appendix A).

Table 1. Survey Details and Conditions

Date	Time of Day	Survey Conditions
4/18/2011	0710-1358	Overcast through most of survey, with light drizzle occasionally through 0745. Temps from 59° to high 60°s, with mild to moderate (3-5 mph) s.w. winds by mid day.
4/29/2011	0820-1344	Mostly clear through day. 66° to high 70s. Near calm (in early a.m.) to s.w. winds of up to approximately 6 mph.
5/9/2011	0820-1410	Mostly cloudy (50-100% c.c.) throughout survey. 59° at start of survey, with a high of mid 60°s at end. Wind quite variable throughout day, at 2-6 mph in morning, and 5-12 mph (gusts to 15mph), mostly s.w., in afternoon.
5/23/2011	0830-1328	Overcast at start, to partly cloudy (75-50% c.c.) later. 63° to low 70°s. Calm in a.m. to 4-8 mph s.w. winds in afternoon.
6/13/2011	0750-1335	Overcast, 65° and calm at start of survey. Clear by 1030 hrs. Mid 70°s and winds of 1-6 mph, s.w., at end.
6/22/2011	0730-1300	Clear throughout survey. Calm, high 60°s at start of survey. 93° and 0-2 mph s.w. winds at end.
7/1/2011	0745-1250	Clear throughout survey, 74°and calm at start. 92°, 2-5 mph s.w. winds at end.
7/15/2011	0710-1310	Overcast, 64°, and calm at start. Clear by late morning. 77°, 2-5 mph s.w. winds at end.
7/26/2011	0650-1200	Clear throughout survey. 69°, calm at start. 92° by end, 2-6 mph, s.w. winds.

Abbreviations

c.c = cloud cover
mph = miles per hour
All temperatures are in degrees Fahrenheit

2.1 Habitat Assessment

When the focused LBV/SWF survey was initiated for the Project in 2010, AECOM avian biologist Doug Willick examined all areas within the 115 kV portion of the Project that had previously been mapped as riparian woodland or riparian scrub habitats. This initial habitat assessment was conducted in order to identify all areas of potentially suitable LBV/SWF breeding habitat within the Project area. The primary criteria used to evaluate the suitability of riparian related habitats are included in the paragraphs that follow. Those areas determined to have at least some suitability for these species, and which were surveyed for LBV and SWF in 2010, were surveyed again during the 2011 survey effort. During 2011, however, the LBV/SWF survey areas were increased to include a small riparian patch within the proposed Alberhill Substation property, as well as a portion of Temescal Creek that lies within the biological buffer area adjacent to the Alberhill Substation.

2.1.1 Species Composition and Structure

Although both LBV and SWF are known to utilize a variety of riparian trees and shrubs in habitat occupied by breeding birds, certain species (e.g., willows and mulefat) are more commonly found in LBV and SWF breeding habitat. Conversely, some riparian habitats (native or nonnative) are less typically favored by nesting LBV and SWF, such as those dominated by white alder, California sycamore, or giant reed (*Arundo donax*). Both birds typically occupy habitat with a diverse structure that includes a variety of young to moderate-aged trees and a fairly dense, shrubby understory. SWF, in particular, typically prefer moister habitats, and will usually require riparian communities that contain surface water within or adjacent to their territories. SWF habitat, therefore, will often have a marshy element and/or a variety of herbaceous wetland species in the understory, such as that associated with the Valley Freshwater Marsh plant community.

2.1.2 Habitat Condition

Habitat condition, or quality, can be an important factor in whether or not a particular area would provide potential nesting habitat for LBV or SWF. Cattle grazing, flooding, fires, or human disturbance, for example, can degrade or eliminate the understory component of a riparian area and substantially reduce its suitability for these species.

2.1.3 Minimum Habitat Size

The overall extent of potential LBV/SWF habitat that is available at a given site may limit its suitability as breeding habitat. Although much variation occurs in the size of breeding territories of LBV and SWF, minimum territory sizes for each species are generally at least 0.5 acre, and usually much larger (Sogge et al. 2010; Kus et al. 2010); therefore, patches of potentially suitable habitat smaller than 0.5 acre will likely be unsuitable as breeding habitat for these species.

2.1.4 Isolation of Habitat

The extent of potentially suitable habitat is especially important when an area is completely isolated by extensive areas of unsuitable habitat; therefore, the more a patch of potentially suitable habitat might be isolated, the more important it is that the habitat patch be of sufficient size to support one or more average-sized breeding territories.

3.0 SURVEY RESULTS

Based on the initial habitat assessment conducted in 2010 for the 115 kV segment of the Project's survey area, 11 sites were determined to have limited to moderate potential to support LBV and/or SWF. The addition of the 2 new survey areas located within and adjacent to the proposed Alberhill Substation site increased the number of LBV/SWF survey areas analyzed in 2011 to 13 sites (Appendix B). A description of each site is provided below, under Section 3.1 Description of Survey Sites.

In summary, approximately five of the sites appeared to have moderate potential to support LBV breeding habitat, while the remaining eight sites were considered only marginally suitable for this species. For SWF, due to their strong preference for wetter riparian communities, only two sites (i.e., Temescal Creek and CWR2-1, Appendix B, Figures B-1 and B-3) were considered to have at least marginal potential for SWF breeding habitat. The remainder of the sites were not considered suitable breeding habitat for SWF. Characteristics of the individual survey areas that were examined during this survey will be discussed in the following section.

3.1 Description of Survey Sites

The Alberhill Substation survey area supported a small patch of riparian habitat associated with a pond inside an equestrian track, which was part of the now abandoned horse ranch. The low-lying area within the southeastern end of the track appears to regularly pond water, with a small amount of water still being present at the beginning of the survey period. In this same area are a few mature tree willows, mulefat, bulrush (*Scirpus* sp.), and a variety of nonnative trees such as saltcedar (*Tamarix* sp.), fan palm (*Washingtonia* sp.), and pines (*Pinus* sp.). Due to the very limited extent of the riparian habitat within the equestrian track, its isolation from any similar habitat, and the prevalence of nonnative trees, the habitat quality was considered poor for such riparian-obligate birds as LBV and SWF.

The Temescal Creek survey area (Appendix B, Figure B-1) lies outside the Project's direct limits of disturbance, although the biological buffer area included a segment of Temescal Creek that occurs immediately west of the proposed Alberhill Substation site. Most of the Temescal Creek riparian habitat within this survey area lies south of Temescal Canyon Road, although a small portion of the creek north of the road was also included in this site. This survey area is comprised of mature, relatively dense woodland, including native riparian trees, such as Goodding's willow (*Salix goodingii*) and Fremont cottonwood (*Populus fremonti*), as well as a fairly substantial percentage of eucalyptus (*Eucalyptus* sp.) south of Temescal Canyon Road. The understory component was mixed, being dominated by mulefat and young trees in areas with a more open canopy, while being quite sparse in areas with a closed canopy of mature trees. The dominant tree, in terms of height, was primarily eucalyptus. Temescal Creek itself, though somewhat limited, conveyed water through the entire survey period. Temescal Creek was one of two survey areas, along with CWR2-1, that was considered to be at least marginally suitable as SWF breeding habitat.

The CWR2-1 survey area contains relatively mature willow and cottonwood riparian woodland, which occurs in somewhat narrow stands bordering the San Jacinto River, immediately upstream of Auto Center Drive (Appendix B, Figure B-3). This habitat also continues upstream from CWR2-1, extending to Interstate 15, approximately 450 feet northeast of CWR2-1. The San Jacinto River along this stretch was carrying running water through most of the survey period (i.e., approximately April to June). During July only one fairly deep pool remained, which held some surface water until the end of the survey (July 26, 2011). This survey area, along with the riparian woodland continuing upstream of

the site, was considered to be of relatively good quality for riparian birds due to well-developed structure, understory component, and minimal amounts of nonnative vegetation. Its primary limitation is the narrowness of the riparian corridor and the proximity of development that borders the river at this location.

The TS1-1 survey area is immediately downstream of CWR2-1, separated only by the Casino Road bridge (Appendix B, Figure B-3). The vegetation within TS1-1, which lines a broader and more open section of the San Jacinto River, appears as a significantly more disturbed riparian community. Although it still supports a few mature willow trees, it is dominated by nonnative vegetation, including salt cedar and giant reed. The upper banks of this survey area were also dominated by ruderal vegetation (e.g., mustard [*Brassica* sp.], tocalote [*Centaurea melitensis*], and castor bean (*Ricinus communis*)].

SWS1-1 is a very small survey area consisting primarily of a few young willow trees growing in an otherwise open field (Appendix B, Figure B-4). Approximately 150 feet west of the SWS1-1 survey area, however, a fairly extensive riparian scrub habitat, characterized by a mix of young to moderate-aged willows and large stands of salt cedar, is found. A small portion of this adjacent and more extensive riparian scrub lies with this survey area. This riparian scrub habitat did not appear to be associated with any noticeable drainage, as the terrain throughout this area is relatively flat. The habitat quality of this survey area was considered moderate to poor, due to the limited amount of native riparian vegetation, the relatively dry nature of the area, and the disturbance associated with homeless encampments and illegal dumping.

SWS4-1 supported a mix of trees, including a few mature coast live oaks and evergreen ash (*Fraxinus uhdei*) (Appendix B, Figure B-5). This survey area was quite dry, had a minimal understory, and merged into a chaparral plant community to the west. SWS4-1 showed noticeable evidence of human disturbance, with Beverly Road and multiple residential units immediately to the north and a dirt road to the east.

Survey sites SWS2-1, SWS3-1, and SWS5-1 were relatively small and close together (Appendix B, Figure B-5). In general, they supported a broad mix of trees, including several mature willows (especially within the SWS5-1 site), coast live oak, and eucalyptus trees (*Eucalyptus* sp.). All sites lacked a significant understory component and were fairly heavily disturbed by significant human activity. Sites SWS3-1 and SWS5-1 lie immediately adjacent to busy Bundy Canyon Road, and residences border the SWS5-1 site to the east and west. A fenced storage area and illegal dumping were noted adjacent to the SWS2-1 and SWS3-1 sites.

The SWS7-1 survey area consists of a broken and very narrow string of young willows bisected by Waldon Road (Appendix B, Figure B-6). Immediately to the north are rural residential properties. The habitat quality of this survey area was considered poor due to the degree of human disturbance, the extent of nonnative vegetation, and the very limited extent and overall sparseness of riparian vegetation.

SWS10-1 follows a small drainage through an agricultural field (Appendix B, Figure B-9). The drainage is bordered narrowly with young willows and mule fat. Although nearly 600 feet in length, the very busy Murrieta Road parallels this survey site as close as 40 feet to the west. The willow scrub habitat is very narrow and is disturbed by active farming practices. The habitat quality of this survey area was considered poor.

The SWS11-1 survey area is primarily in a front yard of a rural residential property and lies immediately east of Byers Road (Appendix B, Figure B-7). It consists of a very narrow strip of young willows which have a minimal understory and are quite sparse. The habitat quality of this site was considered poor due to the sparseness and small extent of vegetation and degree of human disturbance at this location.

CWR4-1 was located on a small drainage that runs through several rural residential properties (Appendix B, Figure B-8). The survey area consisted of several mature willows and cottonwoods, as well as a mix of nonnative trees and shrubs. Due to private property issues, the only access to the site was by way of Holland Road, which runs east-west through the middle of CWR4-1. As several horses were kept on the property to the north of Holland Road and had access to the riparian habitat, the understory habitat was noticeably disturbed. South of Holland Road, due to denseness of the tree canopy and possible thinning by the property owner, the understory vegetation was fairly minimal and disturbed in appearance.

3.2 Least Bell's Vireo

LBV territories were located within, or adjacent to two of the survey areas that were included in the 2011 LBV/SWF focused survey (Temescal Creek and CWR2-1). At the Temescal Creek survey area, two territorial male LBVs were located, in habitat associated with Temescal Creek. The first of the two territories, involving a singing male that was encountered on all but the last site visit, appeared to be restricted to the extensive grove of riparian and eucalyptus woodland south of Temescal Canyon Road. This bird ranged over a distance, east to west, of up to 200 yards. This bird was observed on only a few occasions, as it was generally heard an estimated 100 to 200 feet south of Temescal Canyon Road, in relatively dense habitat. Due to limited visual encounters with this LBV, it could not be determined if the bird was paired. On May 9, the second male LBV was first heard singing along Temescal Creek approximately 500 feet northeast of Temescal Canyon Road. This second LBV was encountered only a couple more times during the survey period. During the June 22 site visit, presumably this same male was again heard and subsequently seen scolding a western scrub-jay (*Aphelocoma californica*) immediately north of Temescal Canyon Road. It eventually crossed to the south side of the road, where it sang a few times and then was not heard again. As this male seemed to be wandering a large area, it was suspected of being a bachelor male. Due to the apparent absence of this bird during the majority of the visits, the actual extent and delineation of the second male LBV's territory along Temescal Creek was poorly known.

As during the 2010 survey, an LBV territory was again present in relatively mature willow-cottonwood riparian habitat immediately upstream of the CWR2-1 survey area. At least one LBV, generally the singing male, was recorded on all site visits except the first (April 18, 2011). This LBV territory was determined to be occupied by a breeding pair, as during at least three of the site visits a second LBV was observed, often in close proximity to the singing male. In addition, on May 9 the pair was discovered to have an active nest at least 250 feet upstream of CWR2-1 survey area. The nest contained one LBV egg and one brown-headed cowbird egg. During the next visit (May 23), it was determined that the nest had been abandoned. No evidence of disturbance, such as from a nest predator, was observed, so it is quite possible the adults abandoned the nest due to the cowbird parasitism incident. No LBV were seen again at the nest site, even though the nest remained intact. Also on May 23, the male was singing very close to the Auto Center Drive bridge crossing; and, therefore, was well within the CWR2-1 survey area during that particular site visit. In general, however, individuals from this LBV territory were detected from about 100 to 400 feet upstream of the CWR2-1 survey area limits.

No additional LBVs were found during the completion of this focused survey.

3.3 Southwestern Willow Flycatcher

No SWF were detected during the 2011 survey in any of the survey areas, whether or not the areas were considered to have potential habitat for the species. In addition, at specific sites considered to be at least marginally suitable for SWF (as identified below) a somewhat larger buffer area was generally surveyed (up to 400 feet from the Project's anticipated direct limits of disturbance). The larger survey buffers were chosen at these selected locations due to the higher quality riparian habitat at these sites, and the presence of high quality habitat continuing on outside the survey area. The majority of the survey areas are fairly small and isolated from any areas of contiguous riparian habitat.

As stated above, the Temescal Creek and CWR2-1 survey areas were the only sites that appeared to show several of the characteristics of SWF breeding habitat; therefore, these two locations were the only sites where the full SWF survey protocol was employed. The remaining sites were considered unsuitable as SWF breeding habitat due to the lack of surface water, the lack of a marshy or herbaceous wetland understory, and often the very limited extent and fairly sparse structure of the riparian vegetation. It is not unusual to encounter migrant willow flycatchers in southern California during the expected spring migration window for this species (primarily mid-May to mid-June). These individuals will only be encountered up to approximately mid-June. Although it is impossible to differentiate willow flycatcher subspecies in the field, migrants are very unlikely to be of the SWF subspecies. In summary then, no SWFs were detected during this 2011 LBV/SWF survey, and neither were any migrant willow flycatchers detected during the survey.

3.4 Brown-Headed Cowbirds

Brown-headed cowbirds were detected (seen or heard) on all nine site visits to the Alberhill Substation and adjacent Temescal Creek survey areas. In most cases, the cowbirds were heading for or flying out of the Temescal Creek riparian habitat. On June 13, a high count of seven birds was made, although two or three birds were more typically encountered. On June 22 and July 26, juvenile cowbirds were seen along Temescal Creek, with one of the juveniles on June 22 still being fed by its host parent, in this case an adult song sparrow (*Melospiza melodia*). With the continued presence of horses in the general vicinity of the proposed Alberhill Substation site, and the fairly extensive riparian habitat and adjacent pasture land along Temescal Creek, this general area is fairly typical of sites that are favored by this brood parasite.

3.5 Other Special Status Avian Species

In addition to LBV, four special status bird species were identified during the course of this focused LBV/SWF survey. These included golden eagle (*Aquila chrysaetos*), Vaux's swift (*Chaetura vauxi*), California gnatcatcher (*Polioptila californica*), and yellow warbler (*Setophaga petechia*). CDFG recognizes the golden eagle as a Fully Protected (FP) species, and nesting Vaux's swift and yellow warblers as California Species of Special Concern (SSC). The California gnatcatcher is federally listed as a Threatened Species. The FP classification was California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Many of the species on these lists have subsequently been listed under the state and/or federal endangered species acts, although the golden eagle is one of the few that has not. SSC species are those which have not been afforded protection under either the state or federal endangered species act, but for which there is conservation concern due to declining populations, limited ranges, and/or continuing threats to their existence.

One to two golden eagles were seen from the Alberhill Substation survey area on the survey dates of June 13 and 22 and July 15 and 26. In most cases, when observed, the eagles were perched on rocky outcrops about ¼ mile north-northwest of the Alberhill Substation site. After remaining perched for up to an hour at a time, they would occasionally be seen taking flight and then drifting off to the northwest or north.

Four Vaux's swifts were observed on April 18 as they flew over the CWR4-1 survey area. This species occurs only as a spring and fall migrant through southern California.

On July 1, two female-plumaged California gnatcatchers were encountered about 150 feet southeast of the SWS4-1 survey area. This species was not located on any of the other surveys here, and due to the atypical habitat for this species, it was assumed that they were likely dispersing juveniles from breeding populations in the general vicinity. The gnatcatchers were foraging in a plant community identified as chamise chaparral, which appeared to be recovering from a fire in the past. Although there were a few plant species present that could be found in the Riversidean sage scrub plant community (preferred breeding habitat for the gnatcatcher), these plants were quite scarce. No Riversidean sage scrub habitat was observed in this particular area.

Yellow warblers are fairly common spring migrants through southern California; therefore, breeding territories were assumed only when (1) singing males were present through the breeding season, (2) male-female pairs were observed, or (3) a family group was observed. As many as four yellow warbler territories were recorded in the Temescal Creek survey area. These territories were all outside the Project's direct disturbance limits. One other yellow warbler territory was present within the nearby Alberhill Substation survey area in the riparian habitat present within the equestrian track. Lastly, a single yellow warbler territory was consistently present through most of the survey period, just upstream of the CWR2-1 survey area. This territory overlapped the LBV territory at this location (as described above) and was centered just upstream of the CWR2-1 site.

3.6 Survey Results Summary

No SWF was located during this focused survey conducted by AECOM for the Alberhill System Project. Three territories of LBV were detected in two of the survey areas. Two of the LBV territories were outside the Project's direct limits of disturbance. A single LBV territory was found in close proximity to the CWR2-1 survey area; however, a small portion of this territory may lie within the survey area. Only four of the survey areas (i.e., Temescal Creek, CWR2-1, CWR4-1, and SWS1-1) appeared to have a moderate potential to be breeding habitat for LBV. The remaining survey areas were considered to have only marginally suitable habitat for LBV. Only two survey areas (Temescal Creek and CWR2-1) were considered to have moderate potential as SWF breeding habitat, while the remaining were considered to be unsuitable for this species.

In addition to LBV, four other special status birds were recorded during this focused survey, which included golden eagle, Vaux's swift, California gnatcatcher, and yellow warbler. With the exception of yellow warbler, all of these species were present in the vicinity of, but not within, the LBV/SWF survey areas for this Project.

4.0 POTENTIAL IMPACTS AND MITIGATION

This section presents a general impact discussion of the potential types of impacts from the proposed Project that may result on LBV and on potential habitat for LBV and SWF and on other potential resources upon which these species depend. These impacts may result from such activities as clearing and grubbing, site preparation/grading, stockpiling, construction of access roads, equipment storage, and other forms of construction disturbance, as well as long-term operational and maintenance impacts. Impacts are defined as activities associated with the Project that destroy, damage, alter, or otherwise affect biological resources in the project area. As defined in the following subsections, these may be classified as long- or short-term impacts, as well as direct or indirect impacts.

4.1 General Impact Categories

4.1.1 Direct Impacts

Direct impacts occur when biological resources, such as habitat for special-status species, are altered, disturbed, destroyed, or removed during the course of project implementation. Examples of direct impacts are removal of breeding or foraging habitat for wildlife or the removal of a special interest species as a result of construction-related activities. Direct impacts on biological resources associated with this Project could result from grubbing or grading for facility construction, preparation of access and spur roads, temporary equipment staging and stockpiling areas, the drilling of tower support footings, and the on-going maintenance of facilities.

4.1.2 Indirect Impacts

Indirect impacts occur when project-related activities affect biological resources in a manner other than direct. Potential indirect impacts include increased noise and other startle effects during construction, fugitive dust generation, the increased risk of wildfires, and the exacerbation or introduction of nonnative, invasive weeds as a result of project-related soil disturbance. Chronic indirect impacts to biological resources resulting from the operation of a project can include, among others, noise, lighting, and increased human presence. These indirect disturbances may cause area wildlife to disperse or avoid the affected area; therefore, indirect impacts may have the potential to adversely affect special status wildlife such as LBV and SWF.

4.1.3 Long-Term Impacts

Long-term impacts occur as a result of construction and have a lasting effect on biological resources after construction is completed. The loss of foraging or breeding habitat for a special status species as a result of the installation of new utility infrastructure (e.g., substations, tower sites, or access roads) would be considered a permanent long-term impact. Periodic operations and maintenance activities over the lifetime of a project, including travel along right-of-way, would also be a long-term impact.

4.1.4 Short-Term Impacts

Short-term impacts may occur during construction and have a temporary effect on biological resources. Though an impact may be a direct impact, it may be short-term and temporary if mitigation measures ensure that impacts would be avoided, minimized, or restored to the extent practicable after the initial impact. Many short-term impacts may also be considered temporary impacts. These impacts are reversible with implementation of mitigation measures (e.g., revegetation of an area that had been temporarily impacted by construction) or cessation of the source of a disturbance.

4.2 Thresholds for Determining Potential Significance

The primary sources for determining significance of impacts on biological resources are the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), along with various regional and local guidelines and ordinances such as the Natural Communities Conservation Act (NCCP) and the MSHCP. The Appendix G Guidelines under CEQA provide direction and interpretation for implementing CEQA statutes.

An adverse impact may meet the significance thresholds per CEQA when the project may impact plant and wildlife species listed by federal or state agencies as threatened or endangered or a species of regional or local significance. A significant impact to listed or other species status species could be direct or indirect, with adverse impacts on suitable habitat for these species also potentially considered significant.

In general, a project may have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the CDFG or the USFWS;
- Substantially reduce the habitat of a plant or wildlife species;
- Cause a plant or wildlife population to drop below self-sustaining levels or threaten to eliminate a plant or animal community;
- Reduce the number or restrict the range of an endangered, rare, or threatened species;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.

4.3 Potential Impacts on Least Bell's Vireo

As identified in Section 3 of this report, least Bell's vireos were found within and adjacent to two of the Project's survey areas. Specific impacts on LBV, both direct and indirect, that could be associated with the Project include:

- Loss of foraging habitat and injury or mortality during Project implementation, such as when an active nest is disturbed or removed during initial grubbing and grading;
- Introduction or increase of human activity into areas where LBV may be present, which may alter normal behavior patterns and sometimes result in displacement of birds;
- Introduction of exotic or invasive plants or animals; e.g., the introduction of certain invasive weed or tree species may cause previously suitable habitat to become unsuitable;
- Attraction of new potential predators on LBV and other small songbirds (e.g., mesopredators such as raccoons, skunks, feral cats or opossums), which may be attracted by trash that may result from increased human presence;
- Temporary and/or permanent noise increases, which may alter normal behavior patterns and sometimes result in displacement of birds; and

- Temporary and/or permanent increases in ambient night lighting associated with Project facilities or construction, which may result in avoidance by LBV or potentially result in higher incidents of predation by nocturnal predators.

Based on locations where LBV were found during the 2011 focused survey, up to two LBV territories may be indirectly impacted by construction of the proposed Alberhill Substation. These impacts would most likely be limited to short-term, construction-related impacts, such as those associated with noise and startle effects, and night-lighting during construction. It is possible that some indirect effects, as described above, may continue to occur after construction of the substation. Long-term indirect impacts, however, are not anticipated to be significantly greater than those that currently exist (e.g., from noise associated with Interstate15 freeway and Temescal Canyon Road).

One additional LBV territory along the San Jacinto River, in the vicinity of the CWR2-1 survey area, may be both directly and indirectly impacted by the Project. In general, this territory was centered a few hundred feet upstream of this survey area, although at least once the male was recorded inside the survey area, less than 100 feet from the Auto Club Drive bridge. Therefore, cottonwood-willow riparian habitat that may encroach into a portion of a LBV breeding territory has potential for direct impacts to occur. If direct removal of riparian habitat can be avoided at this location, short-term, indirect impacts on a LBV territory, such as noise, startle, and night lighting associated with Project-related construction activities, still have potential to occur.

As impacts (direct or indirect) on LBV, including habitat occupied by LBV, would in most cases be considered significant, certain avoidance, minimization, and mitigation measures are therefore recommended to reduce these impacts to below a level of significance. In addition, the MSHCP provides conservation objectives for this species to be considered for projects that may have effects on LBV individuals or occupied habitat. These recommendations and conservation objectives are discussed in Sections 4.5 and 4.6.

4.4 Potential Impacts on Other Special Status Avian Species

As stated above, four special status birds were found during this LBV/SWF survey, including golden eagle, Vaux's swift, California gnatcatcher, and yellow warbler. Golden eagles occupy very large territories for foraging, and due to the infrequency of eagle observations (northeast of the proposed Alberhilll Substation), apparently this area is on the fringes of the observed pair's hunting territory. Suitable breeding sites would not be expected anywhere near the area of the Alberhill Substation, due to disturbance from human activity. Due to the relatively small areas impacted by the Project (relative to the golden eagle's territory size), the presence of human activity existing in the Project area, and the lack of suitable breeding habitat to be potentially affected, the Project is not expected to have any significant effects on golden eagles.

The status of Vaux's swift in southern California is restricted to its being only a spring and fall migrant. This species was observed in flight as it passed over the CWR4-1 survey area. As the SSC status for Vaux's swift applies only to breeding sites, the Project would not be expected to adversely affect the species.

Up to two California gnatcatchers were observed outside the SWS4-1 survey area. Based on behavior and plumage features, the atypical habitat, and their presence during only one site visit, these two birds were considered to likely be dispersing juveniles. The Project is not expected to have any adverse effects on California gnatcatcher at this location.

With just one exception, all of the yellow warbler territories were observed outside the LBV/SWF survey areas. One yellow warbler territory may occur partially within the CWR2-1 survey area; however, the avoidance and minimization measures associated with those for LBV are expected to adequately mitigate any adverse effects from the Project at this location.

No SWF were located during this survey; and, therefore, the Project is not expected to result in impacts on this species.

4.5 MSHCP Conservation Objectives for Least Bell's Vireo

The LBV is identified as a covered species under the MSHCP, and as such has species-specific conservation objectives. These objectives are based on the best available scientific information at the time of the MSHCP preparation. Pursuant to Section 5.0 of the MSHCP (Management, Monitoring and the Adaptive Management Program), the MSHCP mitigation requirements will be monitored and analyzed to determine if they are producing the desired results. Species-specific objectives may be adjusted, if appropriate, as new information is gathered during Plan implementation. The Adaptive Management Program will be used to identify strategies for meeting the MSHCP's general biological goals and objectives and, if necessary, adjusting future conservation strategies according to the information received.

The MSHCP includes eight areas recognized as "Core Areas" for LBV, with one of these identified as the Temescal Wash/Alberhill Creek area. Since LBV is relatively well distributed throughout the MSHCP Plan Area, where suitable habitat is present, the MSHCP will require conservation on a landscape level, with site specific considerations for core areas. As previously stated, the MSHCP provides several conservation objectives to ensure that adequate suitable habitat for LBV is preserved within the Plan Area, as well as to ensure that the existing core area LBV populations are maintained. Of the four conservation objectives in the MSHCP for LBV, Objective 3 would be applicable to individual projects:

> *Objective 3*
>
> *Include within the MSHCP Conservation Area additional areas within the Criteria Area identified as important to the least Bell's vireo. This Objective shall be met through implementation of the Riparian/Riverine Areas and Vernal Pools Policy presented in Section 6.1.2 of the MSHCP, Volume I. Wetland mapping assembled as part of that policy shall be reviewed as part of the project review process and if riparian scrub and/or woodland is identified on the wetland maps and the habitat will not be avoided as part of the project, a focused survey for least Bell's vireo shall be conducted by a qualified biologist in accordance with accepted protocol. If survey results are positive, 90 percent of the occupied portions of the property that provide for long-term conservation value for the vireo shall be conserved in a manner consistent with conservation of the vireo. This will involve including 100 meters of undeveloped landscape adjacent to the habitat conserved* (County of Riverside 2003).

4.6 Avoidance, Minimization, and Mitigation Measures

Based on the fact that LBV has been detected within or adjacent to the survey areas for this Project, avoidance, minimization, and mitigation measures are considered necessary to ensure against potential conflicts with the above state and federal endangered species acts and to comply with regional conservation objectives for this species identified by the MSHCP. In addition to protection afforded by the endangered species acts, live birds and active nests (i.e., nests with eggs or nestlings) of all birds native to North America, are protected under the Federal Migratory Bird Treaty Act of 1918,

as well as the California Fish and Game Code (Section 3503). The following, therefore, are general recommendations to avoid and minimize potential impacts on LBV.

1. Where construction activities are projected to occur in proximity to habitat known to be occupied by LBV, work should be phased in order to avoid the breeding season for LBV (approximately March 15 to September 15). If it is necessary for construction activities to proceed during the breeding season, a buffer area of 500 feet around occupied LBV habitat should be maintained to avoid potential indirect impacts. These buffer distances may be modified based on recommendations by a qualified LBV biologist (who should be approved by the resource agencies prior to initiation of construction activities). The buffers can potentially be reduced by the use of noise attenuating devices such as portable noise walls or curtains. In addition, ambient noise levels and existing terrain, vegetation, or other factors can be considered when establishing a suitable buffer distance to avoid impacts on LBV-occupied habitat. Any adjustments to the buffer distances should be coordinated with the appropriate resource agencies. At locations where construction buffers for LBV territories have been approved for distances less than 500 feet, a qualified LBV biologist should be present at all times during the breeding season. The biologist will monitor LBV behavior and breeding activities to ensure that the birds are not being adversely affected by Project-related construction activities.

2. If LBV, and especially any active nests of this species, are discovered inside the buffer areas at any time during the breeding season or if approved buffer areas do not appear to be sufficient based on observations by the monitoring biologist, the biologist should have the authority to stop work until the situation can be reviewed and a new minimization strategy employed. It may be necessary to coordinate minimization strategies with the appropriate resource agencies.

3. Prior to the initiation of construction activities, in areas where LBV or LBV-occupied habitat may be adversely affected, the biological monitor will conduct a contractor education program for all construction personnel working in these areas. The contractor education program will provide guidance regarding the avoidance, as much as is practicable, of harm, harassment, injury, or death of wildlife. This program will emphasize the conservation of the wetlands/riparian systems, native habitats, and associated wildlife during Project construction and include: (a) the purpose of resource protection, (b) a description of the onsite sensitive habitats and species, (c) the conservation measures that will be implemented in conjunction with Project construction, and (d) any site-specific requirements related to avoidance and minimization of impacts on LBV. This instruction will be given as often as necessary to ensure that all personnel working onsite are adequately briefed on these requirements.

4. In areas where LBV were found during the 2011 LBV/SWF focused survey, surveys should be repeated if construction activities have not commenced by the beginning of the 2012 LBV breeding season. This would also be recommended for the Project's survey areas that have moderate or higher quality habitat for these species. Alternatively, surveys would not be necessary for these locations if the areas were considered occupied by LBV, and appropriate avoidance and minimization measures are implemented.

5. All impacts to riparian scrub and woodland habitats that would be potentially suitable for LBV and SWF (whether or not these areas are known to be occupied) should be avoided to the maximum extent practicable. For locations where these impacts cannot be avoided, areas of temporary impacts should be restored with riparian habitat that would be suitable for LBV.

Where habitat known to be occupied by LBV is permanently impacted by the Project, these impacts will comply with MSHCP conservation Objective 3, which states that "90 percent of the occupied portions of the property that provide for long-term conservation value for the vireo shall be conserved in a manner consistent with conservation of the vireo. This will involve including 100 meters of undeveloped landscape adjacent to the habitat conserved."

6. Based on the results of the 2011 LBV/SWF focused surveys, brown-headed cowbird trapping would be recommended in areas where LBV territories were located along Temescal Creek in the vicinity of the proposed Alberhill Substation. This would likely benefit LBV territories that have been present in this area. Cowbirds were observed consistently in the Temescal Creek survey area, and at least one incident of brood parasitism was documented.

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APPENDIX A
AVIAN SPECIES LIST

APPENDIX A
AVIAN SPECIES LIST

The following is a list of all bird species detected during the focused Least Bell's Vireo and Southwestern Willow Flycatcher Survey for the Alberhill System Project (conducted between April 18 and July 26, 2011). Nomenclature and taxonomy for birds follow the American Ornithologists' Union Seventh Edition of the Checklist of North American Birds (1998), and the 52nd Supplement.

Family and Common Name	Scientific Name
BIRDS	
Anatidae (Swans, Geese and Ducks)	
mallard	*Anas platyrhynchos*
Odontophoridae (New World Quail)	
California quail	*Callipepla californica*
Phalacrocoracidae (Cormorants)	
double-crested cormorant	*Phalacrocorax auritus*
Ardeidae (Herons and Bitterns)	
great blue heron great egret snowy egret black-crowned night-heron	*Ardea herodias* *Ardea alba* *Egretta thula* *Nycticorax nycticorax*
Threskiornithidae (Ibises and allies)	
white-faced ibis	*Plegadis chihi*
Cathartidae (New World Vultures)	
turkey vulture	*Cathartes aura*
Pandionidae (Ospreys)	
osprey	*Pandion haliaetus*
Accipitridae (Hawks, Kites, Eagles and allies)	
Cooper's hawk red-shouldered hawk red-tailed hawk golden eagle	*Accipiter cooperii* *Buteo lineatus* *Buteo jamaicensis* *Aquila chrysaetos* – FP
Falconidae (Caracaras and Falcons)	
American kestrel	*Falco sparverius*
Charadriidae (Plovers)	
killdeer	*Charadrius vociferous*

Family and Common Name	Scientific Name
Laridae (Gulls, Terns, and Skimmers)	
California gull	*Larus californicus*
Columbidae (Pigeons and Doves)	
rock pigeon	*Columba livia* – I
band-tailed pigeon	*Patagioenas fasciata*
Eurasian collared-dove	*Streptopelia decaocto* – I
mourning dove	*Zenaida macroura*
Cuculidae (Cuckoos, Roadrunners, and allies)	
greater roadrunner	*Geococcyx californianus*
Strigidae (Typical owls)	
barn owl	*Tyto alba*
Apodidaie (Swifts)	
Vaux's swift	*Chaetura vauxi* – SSC
white-throated swift	*Aeronautes saxatalis*
Trochilidae (Hummingbirds)	
black-chinned hummingbird	*Archilochus alexandri*
Anna's hummingbird	*Calypte anna*
Costa's hummingbird	*Calypte costae*
Picidae (Woodpecker)	
acorn woodpecker	*Melanerpes formicivorus*
Nuttall's woodpecker	*Picoides nuttallii*
downy woodpecker	*Picoides pubescens*
northern flicker	*Colaptes auratus*
Tyrannidae (Tyrant Flycatchers)	
western wood-pewee	*Contopus sordidulus*
black phoebe	*Sayornis nigricans*
Say's phoebe	*Sayornis saya*
ash-throated flycatcher	*Myiarchus cinerascens*
Cassin's kingbird	*Tyrannus verticalis*
western kingbird	*Tyrannus vociferans*
Vireonidae (Vireos)	
Bell's vireo	*Vireo bellii* – FE, SE
Cassin's vireo	*Vireo cassinii*
warbling vireo	*Vireo gilvus*

Family and Common Name	Scientific Name
Corvidae (Ravens, Crows, Jays, and allies)	
western scrub-jay American crow common raven	*Aphelocoma californica* *Corvus brachyrhynchos* *Corvus corax*
Alaudidae (Larks)	
horned lark	*Eremophila alpestris*
Hirundinidae (Swallows)	
northern rough-winged swallow cliff swallow	*Stelgidopteryx serripennis* *Petrochelidon pyrrhonota*
Paridae (Chickadees and Titmice)	
mountain chickadee	*Poecile gambeli*
Aegithalidae (Bushtits)	
bushtit	*Psaltriparus minimus*
Troglodytidae (Wrens)	
Bewick's wren house wren	*Thryomanes bewickii* *Troglodytes aedon*
Polioptilidae (Gnatcatchers)	
California gnatcatcher	*Polioptila californica* – FT, SSC
Sylviidae (Wrentit)	
wrentit	*Chamaea fasciata*
Turdidae (Thrushes)	
American robin	*Turdus migratorius*
Mimidae (Mockingbirds and Thrashers)	
northern mockingbird California thrasher	*Mimus polyglottos* *Toxostoma redivivum*
Sturnidae (Starlings)	
European starling	*Sturnus vulgaris* – I
Ptilogonatidae (Silky-flycatchers)	
phainopepla	*Phainopepla nitens*

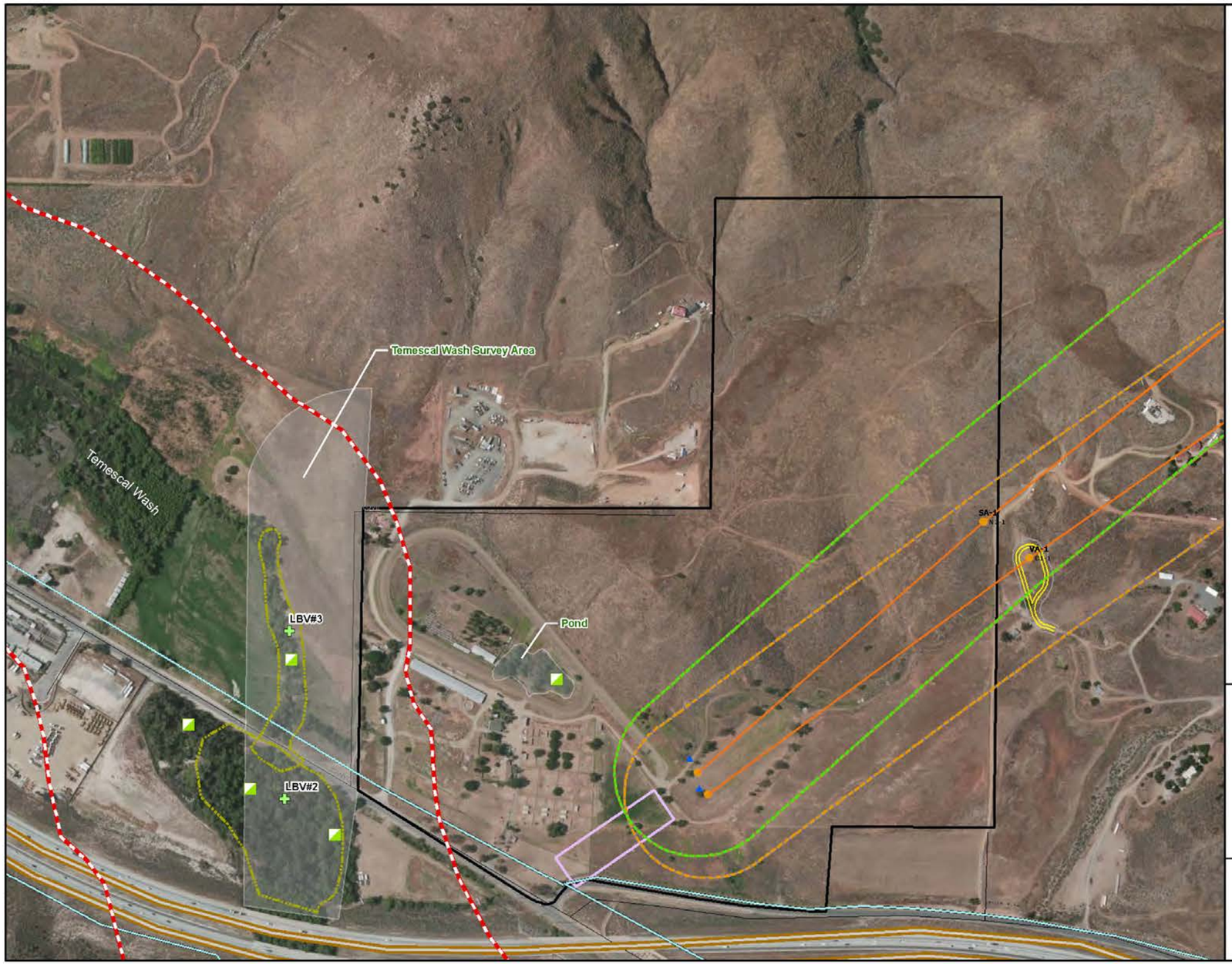
Family and Common Name	Scientific Name
Parulidae (Wood Warblers)	
yellow warbler (CSC)	*Setophaga petechia* - SSC
yellow-rumped warbler	*Setophaga coronata*
MacGillivray's warbler	*Geothlypis tolmiei*
willow warbler	*Cardellina pusilla*
common yellowthroat	*Geothlypis trichas*
Emberizidae (Sparrows and allies)	
spotted towhee	*Pipilo maculatus*
rufous-crowned sparrow	*Aimophila ruficeps*
California towhee	*Melozone crissalis*
lark sparrow	*Chondestes grammacus*
sage sparrow	*Amphispiza belli*
song sparrow	*Melospiza melodia*
Cardinalidae (Cardinals, Grosbeaks, and allies)	
western tanager	*Piranga ludovicianus*
black-headed grosbeak	*Pheucticus melanocephalus*
blue grosbeak	*Passerina caerulea*
lazuli bunting	*Passerina amoena*
Icteridae (Blackbirds, Orioles and Allies)	
red-winged blackbird	*Agelaius phoeniceus*
western meadowlark	*Sturnella neglecta*
Brewer's blackbird	*Euphagus cyanocephalus*
brown-headed cowbird	*Molothrus ater*
Bullock's oriole	*Icterus bullockii*
hooded oriole	*Icterus galbula*
Fringillidae (Finches)	
purple finch	*Carpodacus purpureus*
house finch	*Carpodacus mexicanus*
American goldfinch	*Spinus tristis*
lesser goldfinch	*Spinus psaltria*
Lawrence's goldfinch	*Spinus lawrencei*

Family and Common Name	Scientific Name
Passeridae (Old World Sparrows)	
house sparrow	*Passer domesticus* - I

Legend

FP	A CDFG Fully Protected species
FT	A USFWS federally threatened species
FE	A USFWS federally endangered species
SE	A CDFG state endangered species
SSC	A CDFG California Species of Special Concern (for breeding individuals/populations)
I	Introduced (nonnative) species

APPENDIX B
SURVEY AREA MAPS



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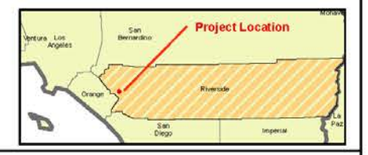
Alberhill System Project, Proposed Project Components

- Substation Survey Area
- C1 500 kV T/L Survey Area
- N3 500 kV T/L Survey Area
- Existing Serrano-Valley 500 kV T/L Survey Area
- SA 500 kV T/L Survey Area
- VA 500 kV T/L Survey Area
- Pulling Point Disturbance Area
- Access Road
- Access Road Disturbance Area
- Proposed 500 kV T/L
- Existing Serrano-Valley 500 kV T/L
- 115 kV T/L
- N3-1 Tower Location
- Pulling Point
- Tensioning Point
- Yellow Warbler
- LBVIR1 Least Bell's Vireo
- LBV Avoidance Area (March 1 through September 1)
- LBV Territory
- TB-1 LBV Survey Area

Basemap

- Major Freeways
- Roads

Note
kV = kilovolt
VA = Alternative 500kV VA Transmission Line
SA = Alternative 500kV SA Transmission Line
C1 = Proposed 500kV C1 Transmission Line
N3 = Proposed 500kV N3 Transmission Line
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

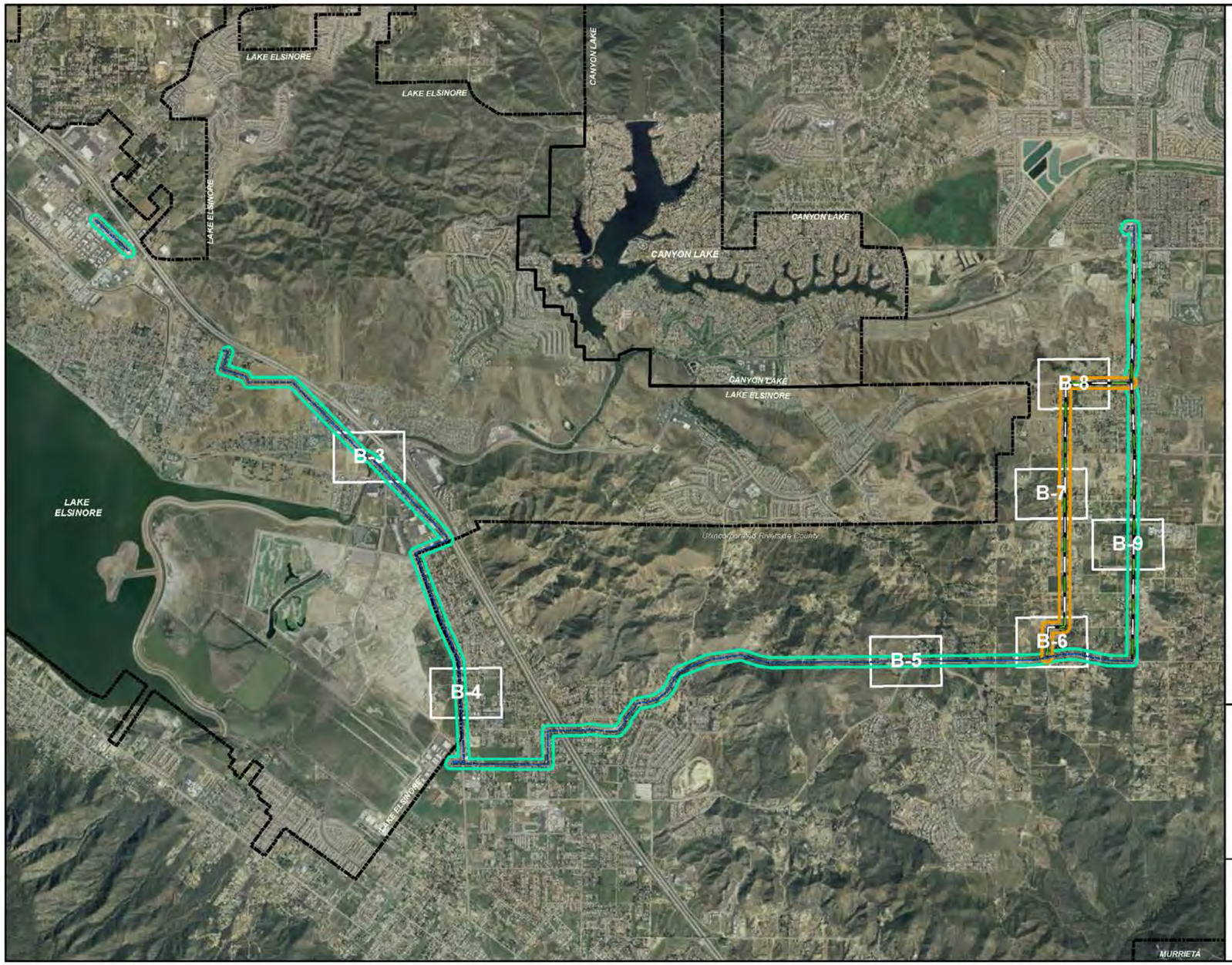
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SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
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Date: 8/23/2011
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

400 200 0 400 Feet

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Figure B-1
Alberhill System Project
Substation Survey Area, Survey Focus Areas and Least Bell's VireoObservations
Riverside County, CA

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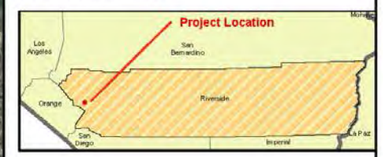
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

Basemap Data

- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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AECOM

Figure B-2
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California
Index Map



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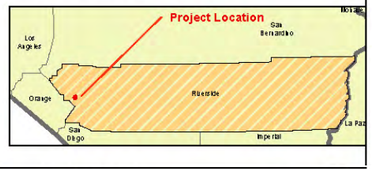
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
- California Gnatcatcher
- Yellow Warbler
- LBV#1 Least Bell's Vireo
- LBV Avoidance Area (March 1 through September 1)
- LBV Territory
- TS-1 LBV Survey Area

Basemap Data

- Freeways/Highways
- Roads
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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Figure B-3
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California

Sheet 1 of 7

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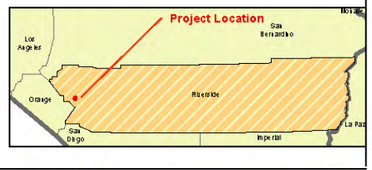
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
- California Gnatcatcher
- Yellow Warbler
- LBV#1n Least Bell's Vireo
- LBV Avoidance Area (March 1 through September 1)
- LBV Territory
- TB-1 LBV Survey Area

Basemap Data

- Freeways/Highways
- Roads
- City Boundary

Note
KV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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Figure B-4
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California

Sheet 2 of 7

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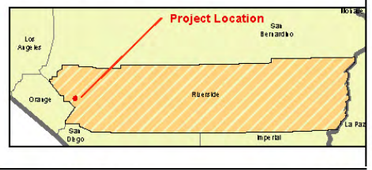
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
- California Gnatcatcher
- Yellow Warbler
- Least Bell's Vireo
- LBV Avoidance Area (March 1 through September 1)
- LBV Territory
- TB-1 LBV Survey Area

Basemap Data

- Freeways/Highways
- Roads
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

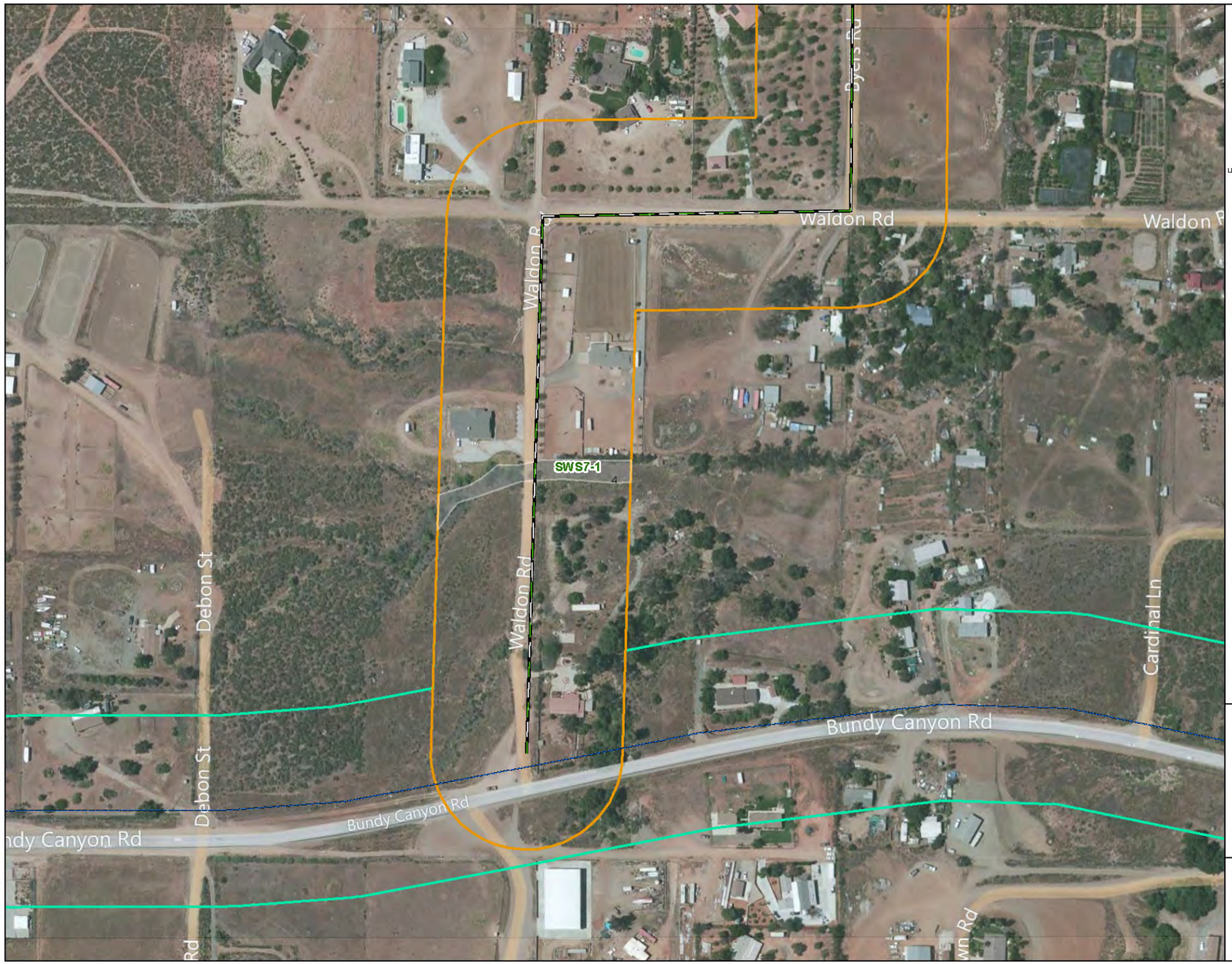
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Figure B-5
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California

Sheet 3 of 7

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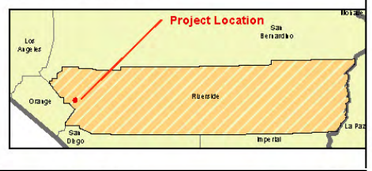
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
- California Gnatcatcher
- Yellow Warbler
- LBV#1 Least Bell's Vireo
- LBV Avoidance Area (March 1 through September 1)
- LBV Territory
- TB-1 LBV Survey Area

Basemap Data

- Freeways/Highways
- Roads
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

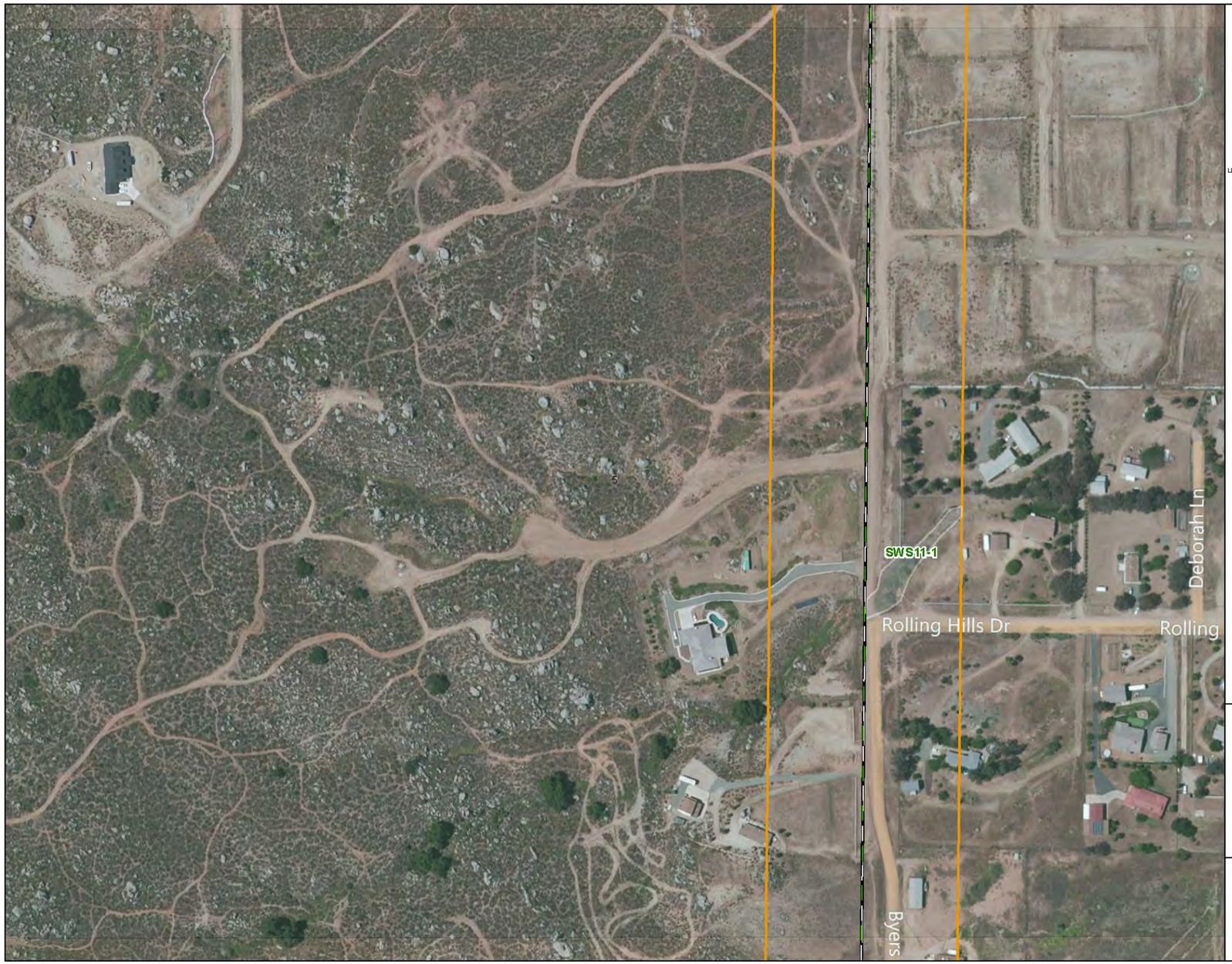
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Figure B-6
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California

Sheet 4 of 7

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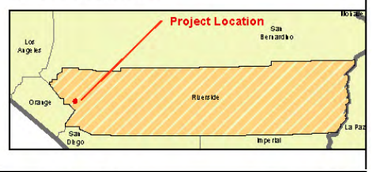
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
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- Freeways/Highways
- Roads
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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AECOM

Figure B-7
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California

Sheet 5 of 7

Path: C:\Projects\2011 surveys\Alberhill\ArcGIS\Preliminary\bird\Figure 5 115kv Study Area.mxd



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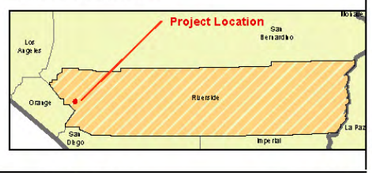
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
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Basemap Data

- Freeways/Highways
- Roads
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

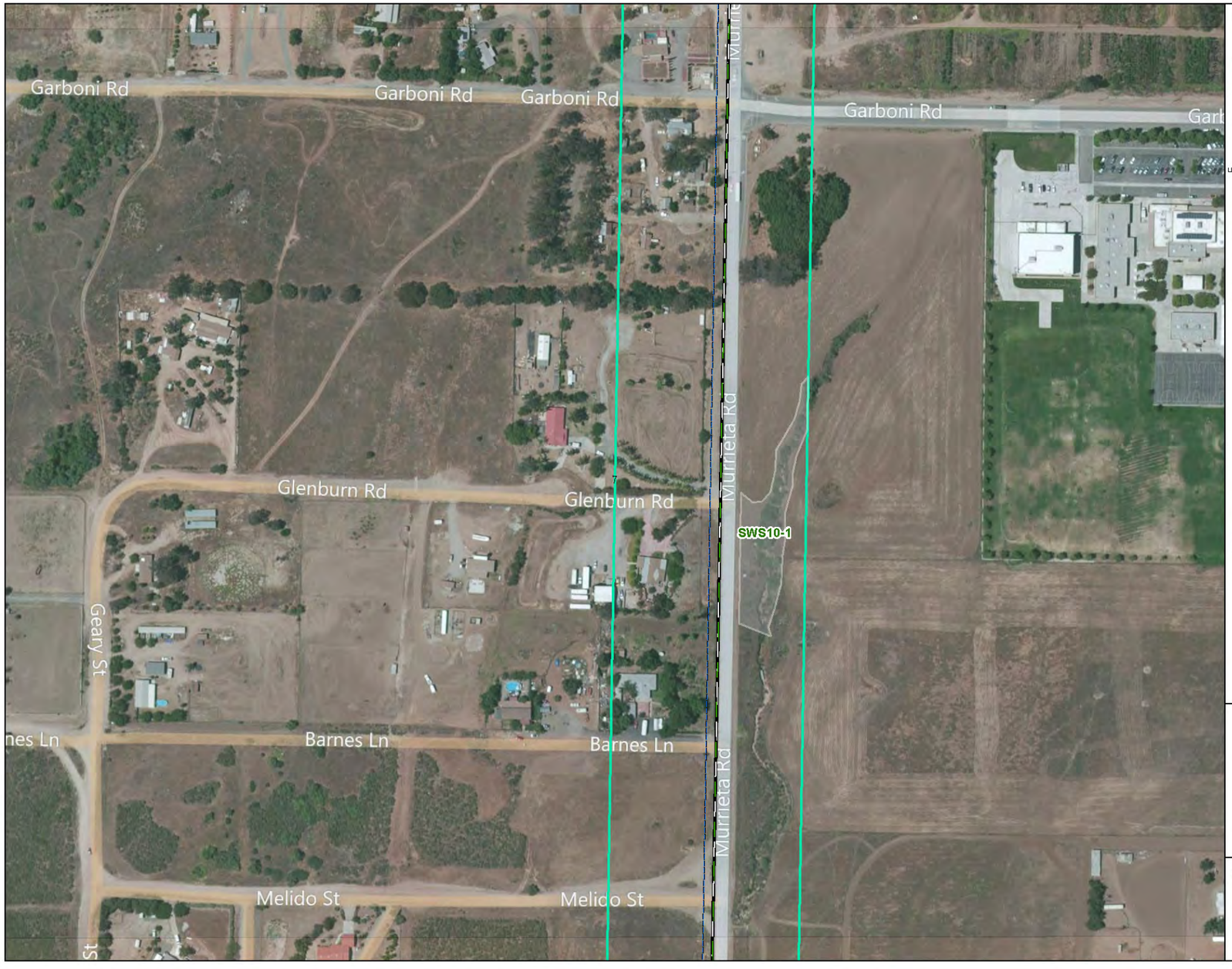
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AECOM

Figure B-8
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California

Sheet 6 of 7

Path: C:\Projects\2011 surveys\Alberhill\ArcGIS\Preliminary\bird\Figure 5 115kv Study Area.mxd



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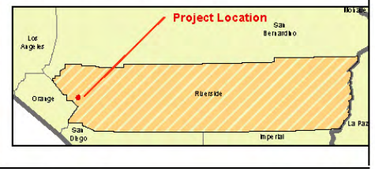
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
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Basemap Data

- Freeways/Highways
- Roads
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
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MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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Figure B-9
Alberhill System Project
115 kV Survey Area
Survey Focus Areas and
Least Bell's Vireo Observations
Riverside County, California

Sheet 7 of 7

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APPENDIX C
SITE PHOTOS



Temescal Creek (south of Temescal Canyon Road), southwest of the Alberhill Substation site (habitat occupied by least Bell's vireo). Habitat also considered to have marginal potential for southwestern willow flycatcher.

Another view of Temescal Creek (south of Temescal Canyon Road), looking west from SW. corner of the Alberhill Substation site (habitat occupied by least Bell's vireo).

Looking northwest toward Temescal Creek (the portion north of Temescal Canyon Road), from the Alberhill Substation site. Habitat occupied by an apparent bachelor male least Bell's vireo.

Looking north at the isolated wetlands on the Alberhill Substation site (former horse ranch property). No vireos were found here, though an apparent breeding territory of yellow warbler was present.

San Jacinto River, looking north from Auto Center Drive (with I-15 in the background). Near the edge of survey area CWR2-1, this habitat was occupied by a breeding pair of least Bell's vireos in 2011 (and also known to be occupied by vireos in 2010).



Survey area SWS1-1, looking west-northwest from Mission Trail. An apparent bachelor male least Bell's vireo was in habitat about 300 feet northwest of this site in 2010, but no vireos were located here during the 2011 surveys.

Looking southeast at survey area CWR4-1 (Holland Road, west of Byers Road). Fairly disturbed by residential development immediately bordering the site. No least Bell's vireos were detected here during either the 2010 or 2011 surveys.

Looking west at survey area SWS4-1 (near Beverly Street and Bundy Canyon Road). Very limited and isolated suitable least Bell's vireo habitat. No vireos were detected here during either the 2010 or 2011 surveys.

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Draft
Burrowing Owl Focused Survey Report for the Alberhill Systems Project Riverside County, California

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An EDISON INTERNATIONAL® Company

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August 2011

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ACRONYMS

BUOW	western burrowing owl
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Data Base
GPS	Global Positioning System
kV	kiloVolt
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MVA	mega volt ampere
NCCP	Natural Communities Conservation Act
NEPA	National Environmental Policy Act
T/L	transmission line
USFWS	U.S. Fish and Wildlife Service

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1.0 INTRODUCTION

This report summarizes the results of a focused survey completed by AECOM for the western burrowing owl (*Athene cunicularia hypugea*) (BUOW) in Riverside County (County), California. The survey was conducted in support of the Alberhill Systems Project (Figure 1), for the Southern California Edison Company (SCE) and was performed between the dates of April 22 and June 21, 2011.

1.1 Project Description and Location

SCE proposes to construct the Alberhill Systems Project (Project, or proposed project) to serve current and projected demand for electricity and maintain electrical system reliability in southwestern Riverside County, including the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar, as well as the surrounding unincorporated areas.

The Project Area (or Survey Area) is defined as the area analyzed for the following Project components: the proposed Alberhill Substation, the proposed 500-kiloVolt (kV) transmission lines (T/L), the proposed 115-kV Subtransmission (Sub) T/L, and the alternative 115-kV Sub T/L (Figures 2 and 3).

- The proposed Alberhill Substation would be an unstaffed, automated 1,120-Mega Volt Ampere (MVA) 500/115-kV substation with an ultimate build-out of 1,680 MVA. Based on the preliminary design, approximately 8,000 cubic yards of soil, vegetation, and rock would be removed from the site (area of anticipated direct impact). In addition, approximately 10,320 cubic yards of soil would be removed as a result of excavation for foundation and building footings. Demolition of the existing horse ranch and relocation of a 30-inch gravity agricultural water line (owned and operated by Elsinore Valley Municipal Water District) would be required prior to mass grading. The horse ranch and adjacent undeveloped areas compose the Alberhill Substation survey area.

- The proposed 500-kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the 500-kV T/L include the following: the proposed N3 500-kV transmission line (N3 survey area [to the Alberhill Substation]), the proposed C1 500-kV transmission line (C1 survey area [from the Alberhill Substation]), and the existing Serrano-Valley 500-kV T/L (existing 500-kV T/L alignment). Collectively, all three of these areas, as well as the proposed pull and tensioning locations, are referred to as the 500-kV T/L survey area. The 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the proposed and existing 500-kV T/L) around each of the 500-kV T/L project components.

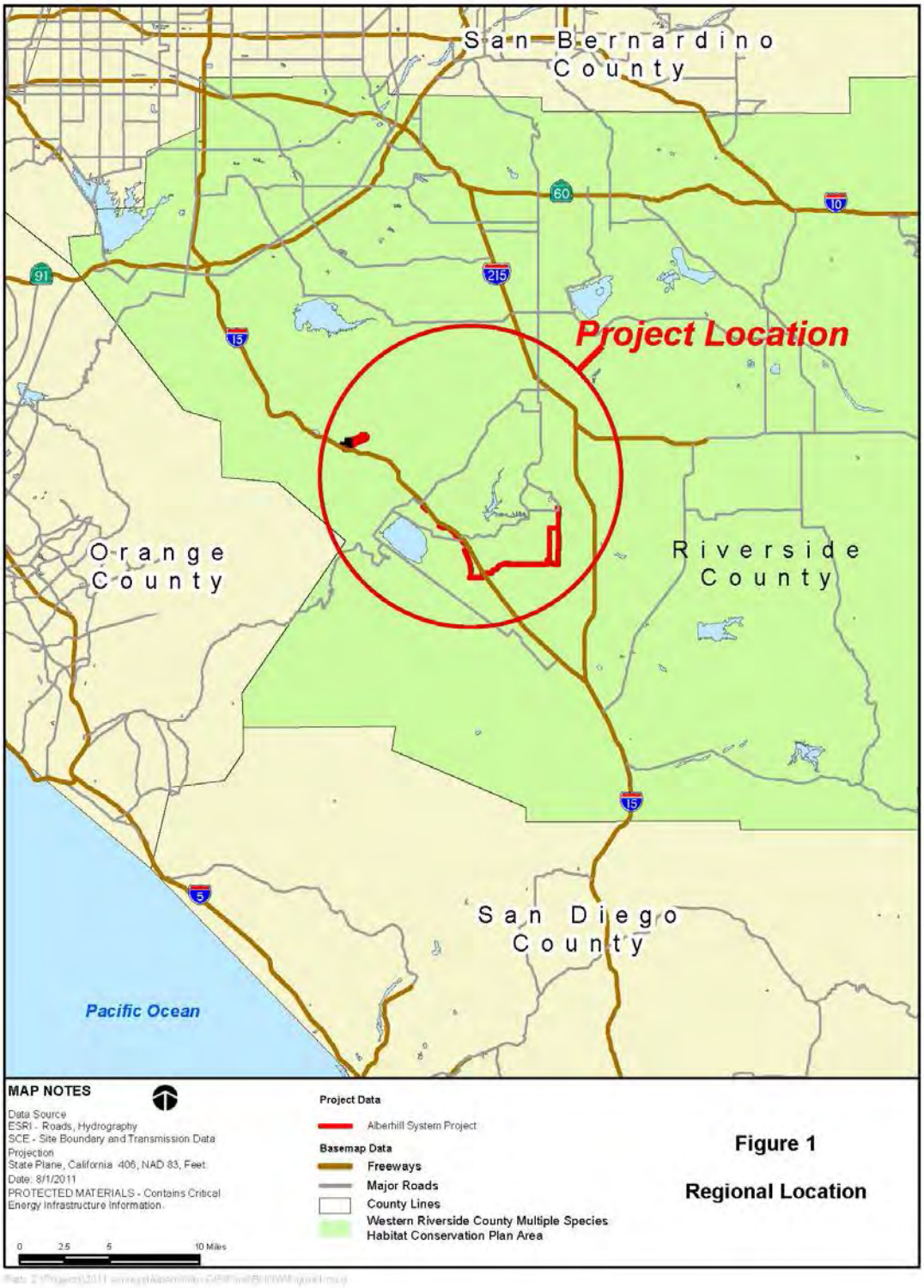
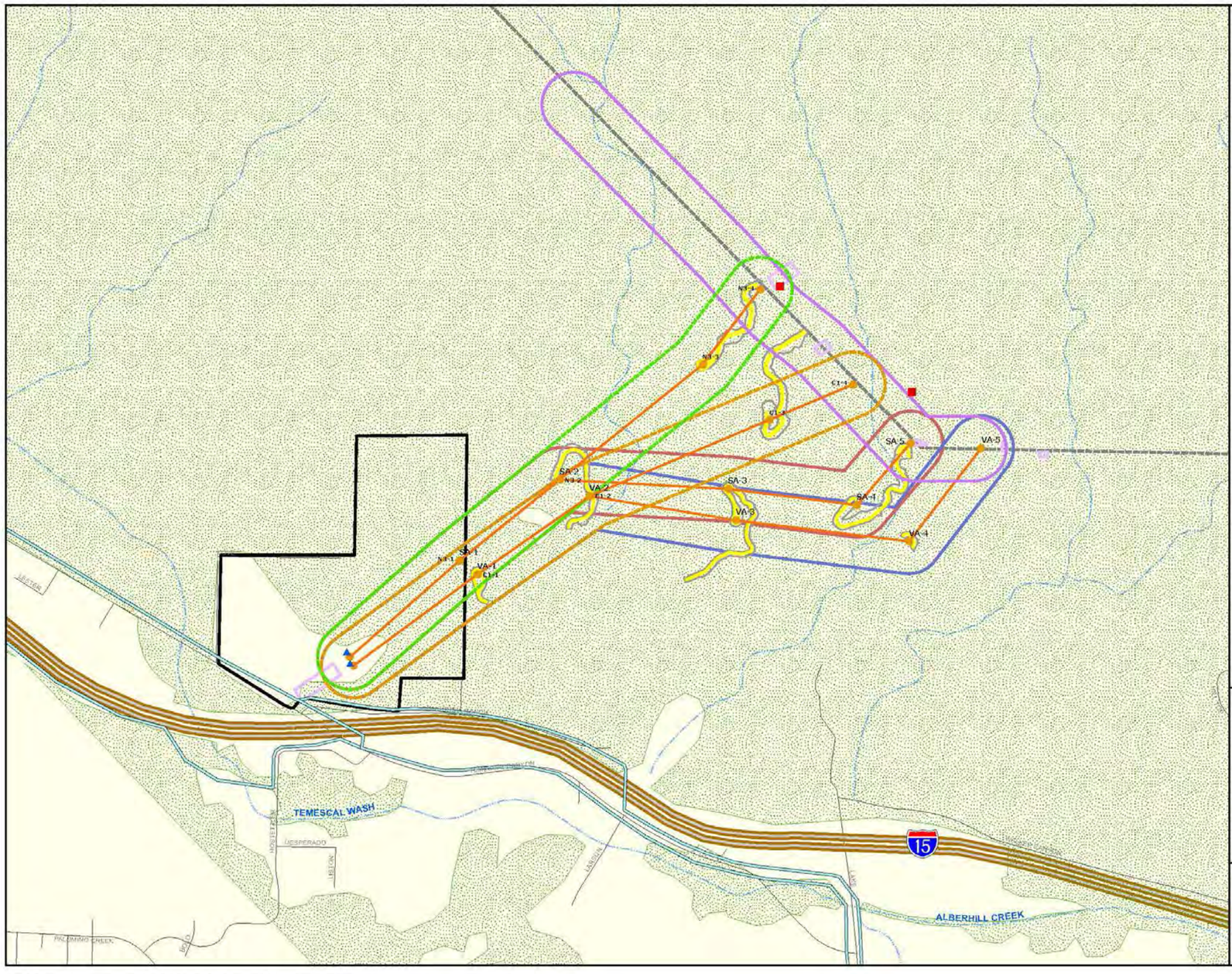


Figure 1

Regional Location



Legend:

Alberhill System Project, Proposed Project Components

- Substation Survey Area
- C1 500 kV T/L Survey Area
- N3 500 kV T/L Survey Area
- Existing Serrano-Valley 500 kV T/L Survey Area
- SA 500 kV T/L Survey Area
- VA 500 kV T/L Survey Area
- Pulling Point Disturbance Area
- Access Road
- Access Road Disturbance Area
- Proposed 500 kV T/L
- Existing Serrano-Valley 500 kV T/L
- 115 kV T/L
- N3-1 Tower Location
- Pulling Point
- Tensioning Point

MSHCP Burrowing Owl Survey

- MSHCP Burrowing Owl Survey Area

Basemap

- Major Freeways
- Roads
- Streams

Note
kV = kilovolt
VA = Alternative 500kV VA Transmission Line
SA = Alternative 500kV SA Transmission Line
C1 = Proposed 500kV C1 Transmission Line
N3 = Proposed 500kV N3 Transmission Line
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
Date: 8/2/2011

PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

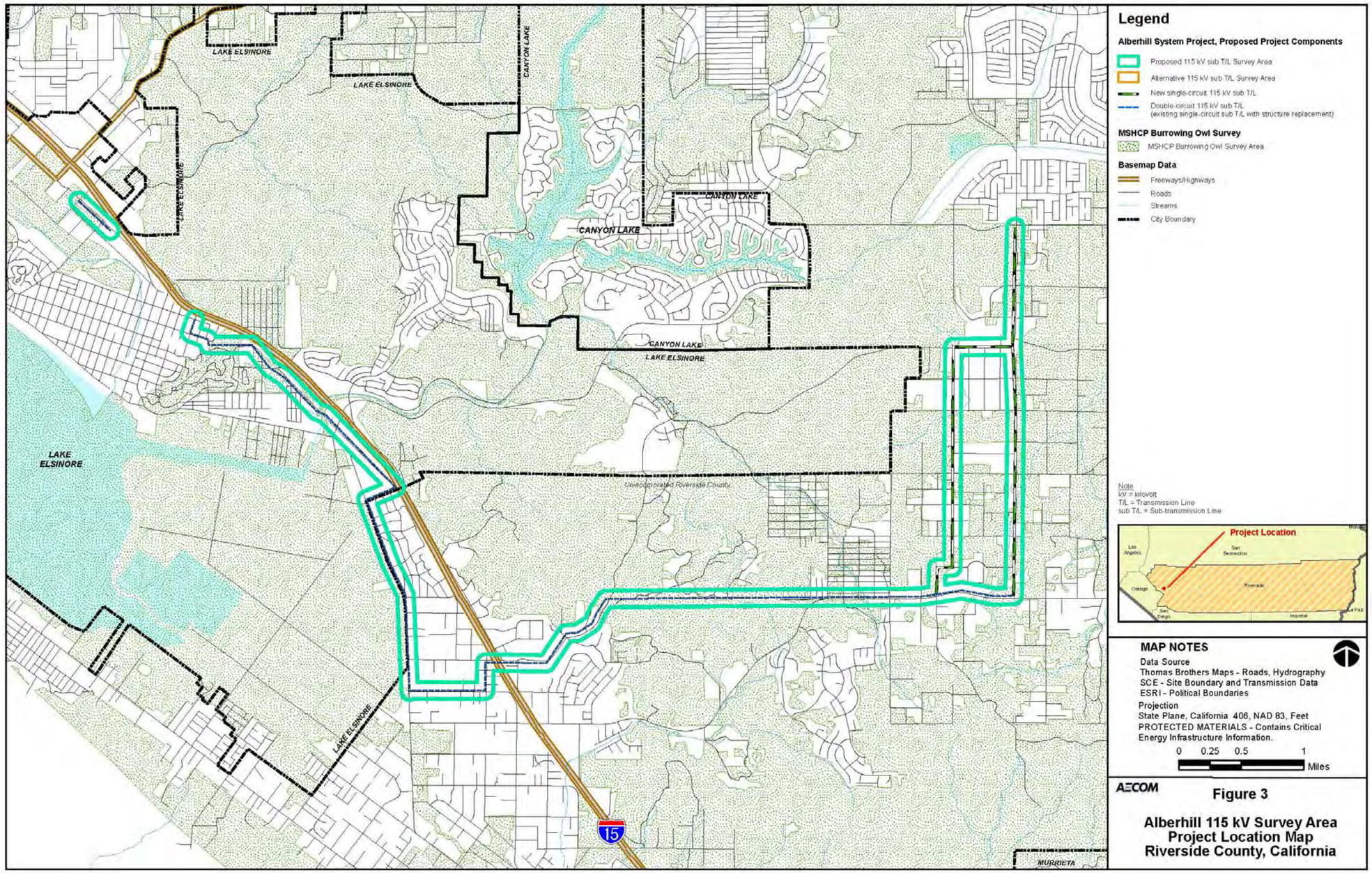
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AECOM

Figure 2

Alberhill Substation & 500 kV Survey Area Project Location Map Riverside County, CA

Path: T:\Projects\2011 surveys\Alberhill\ArcGIS\Final\REDO\MXD\Figure 2 sqft 500 kV Study Area.mxd



Legend

Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

MSHCP Burrowing Owl Survey

- MSHCP Burrowing Owl Survey Area

Basemap Data

- Freeways/Highways
- Roads
- Streams
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
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MAP NOTES

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ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 0.25 0.5 1 Miles

AECOM

Figure 3

Alberhill 115 kV Survey Area
Project Location Map
Riverside County, California

- The alternative 500-kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the alternative 500-kV T/L include the following: the alternative SA 500-kV T/L (SA survey area [to the Alberhill Substation]) and the alternative VA 500-kV T/L (VA survey area [from the Alberhill Substation]). Both of these survey areas, as well as the alternative pull and tensioning locations, are referred to as the alternative 500-kV T/L survey area. The alternative 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the alternative and existing 500-kV T/L) around each of the 500-kV T/L project components.

- The proposed 115-kV Sub T/L would consist of a new 115-kV Sub T/L and modification of the existing 115-kV Sub T/L. The 115-kV Sub T/L would transfer electrical service of five existing 115/12-kV substations (Ivyglen, Fogarty, Elsinore, Skylark, and Newcomb substations) to the new 500/115-kV Alberhill Substation. A Western Riverside County Narrow Endemic Plant Survey Area (NEPSA) identified along the 115-kV Sub T/L composes the 115-kV Sub T/L survey area. The area analyzed for the 115-kV Sub T/L survey area encompasses a 400-foot-wide corridor (200 feet on either side of the 115-kV Sub T/L) around the 115-kV Sub T/L project components.

- An alternative to the proposed 115-kV Sub T/L has also been analyzed (alternative 115-kV Sub T/L). This alternative consists of an optional routing of the eastern portion of the proposed 115-kV Sub T/L.

This survey investigated all potential habitat for the BUOW that is anticipated to be directly impacted by the Project. In addition, the area surveyed included built-in buffer areas, as described above, for the purpose of analyzing potential indirect effects associated with the Project. The elevation of the various survey areas investigated ranged from a low of about 1,185 feet to a high of 1,780 feet above mean sea level.

1.2 Species Account

The BUOW is a relatively small, ground-dwelling bird of prey found in annual and perennial grasslands, rangeland, agricultural areas, deserts and open scrublands characterized by sparse, low-growing vegetation. The western BUOW has the broadest range of two subspecies of burrowing owl that occur within North America, being found throughout much of the western United States, as well as the southern Canada prairie region. This species is migratory in the northern and higher elevation portions of its range (departing these areas during the winter), but it is typically resident throughout southern California (Haug et al. 1993; Shuford and Gardali 2008). It persists, and occasionally even thrives, in some landscapes highly altered by human activity. In California, for example, the largest population of BUOWs occurs in the extensive agricultural land of the Imperial Valley in the southeastern portion of the state (Patten et al. 2003). Here they use both fallow fields, as well as land in active agricultural production, as long as berms or culverts are available along the field edges to provide potential burrow sites for roosting and nesting. Other human-altered landscapes that BUOWs are also known to use include dairies, drainage channels, airfields, golf courses, cemeteries, and relatively large vacant lots in urban settings. This species can be found in the California deserts, but it is only a sparse inhabitant of open desert scrub (Garrett and Dunn 1981). BUOWs typically occur on relatively level to gently rolling terrain but seem to avoid areas dominated by steep topography (Patten et al. 2003).

The BUOW has been designated by the California Department of Fish and Game (CDFG), in conjunction with the Western Field Ornithologists, as a Bird Species of Special Concern, Priority 2, due to a substantial reduction in numbers throughout much of the state during recent decades. The most severe declines have been documented in the central and southern coastal areas and the Central Valley portion of the state (Shuford and Gardali 2008). In most areas of coastal southern California where this owl historically was a common resident and breeder, it is now primarily noted only as a rare fall and winter visitor (Unitt 2003; Hamilton and Willick 1996). These population declines are related to the loss and degradation of owl habitat, which occurs when grasslands and farmland are replaced by widespread urban development. BUOW habitat has also been adversely affected by certain changes in agricultural practices and the continued eradication of ground squirrels and other fossorial (i.e., burrowing) mammals. These practices have degraded or eliminated suitable nesting areas for the owls.

The Western BUOW does not normally dig its own burrows but uses or modifies existing burrows made by various fossorial mammals, such as ground squirrels or prairie dogs. In southern California, burrows of the California ground squirrel (*Otospermophilus beecheyi*), or the round-tailed ground squirrel (*Xerospermophilus tereticaudus*) in the desert regions, are most commonly used; however, it is also known to utilize burrows and dens excavated by such animals as coyotes (*Canis latrans*), American badger (*Taxidea taxus*), and fox species (*Urocyon* sp. and *Vulpes* sp.). BUOWs may also use man-made structures, such as culverts, debris or rubble piles, or pipes (Shuford and Gardali 2008) for nesting or roosting sites. They commonly utilize elevated perch sites such as fence posts, hay bales, or mounds of dirt that are often present adjacent to their burrows. In California, the primary nesting season for BUOWs extends from March to August but can begin as early as February and extend into late fall (Shuford and Gardali 2008). BUOWs are opportunistic in their foraging techniques, preying primarily on the more abundant varieties of large insects and small mammals. Several studies on this specie's food preferences have shown that vertebrate prey will typically dominate their diet during winter months, with invertebrate prey more often being chosen during summer months (Haug et al. 1993). BUOWs are considered to be crepuscular in their activities, being most active during early morning and late evening hours.

1.3 Survey Purpose

The proposed project is located in the coverage area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on conservation of species and their associated habitats in western Riverside County. The MSHCP identifies 146 species of plants and animals as requiring conservation consideration during the environmental review process, 40 of which are specified as having specific survey requirements. Of these 40 species, 34, including BUOW, have an associated survey area map that designates areas where surveys may be required if suitable habitat is present (County of Riverside 2003) (Figures 2 and 3). For certain species identified for coverage under the MSHCP, existing information was considered insufficient; and, therefore, surveys are required in order to obtain the necessary level of information for these species to receive coverage.

Volume 2 of the MSHCP (Species Accounts) also identifies species-specific objectives for the various covered species. Conservation Objective 5 for the BUOW states the following:

> *Surveys for burrowing owl will be conducted as part of the project review process for public and private projects within the burrowing owl survey area where suitable habitat is present. The locations of this species determined as a result of survey efforts shall be conserved in*

accordance with procedures described within Section 6.3.2, MSHCP, Volume I *and the guidance provided below:*

Burrowing owl surveys shall be conducted utilizing accepted protocols as follows. If burrowing owls are detected on the project site then the action(s) taken will be as follows:

If the site is within the Criteria Area, then at least 90 percent of the area with long-term conservation value will be included in the MSHCP Conservation Area. Otherwise:

1. *If the site contains, or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than 3 pairs of burrowing owls, then the on-site burrowing owls will be passively or actively relocated following accepted protocols.*

2. *If the site (including adjacent areas) supports three or more pairs of Burrowing Owls, supports greater than 35 acres of suitable habitat and is non-contiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and Burrowing Owl pairs will be conserved onsite.*

The "accepted survey protocol" (as referenced above), and additional MSHCP conservation objectives specific to the BUOW, will be discussed in following sections of this report.

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2.0 METHODS

The BUOW survey completed for the Project by AECOM was conducted in accordance with survey guidelines provided for the BUOW by the MSHCP. Habitat assessments and focused surveys for BUOW in the MSHCP Plan Area must be conducted in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (County of Riverside 2006)(Survey Instructions). These instructions detail the steps necessary and the methods to be employed in order to sufficiently assess a site for the presence or absence of BUOW. Although the MSHCP references the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation Guidelines" (1993), also adopted by CDFG, the MSHCP Survey Instructions provide additional detail to ensure consistency with specific conservation requirements of the MSHCP.

AECOM wildlife biologists Tim Searl and Doug Willick participated in the completion of this BUOW survey. Both biologists are thoroughly familiar with BUOW habitat, ecology, behavior, field identification, and sign. Table 1 depicts the various components of this focused survey, along with the associated survey dates, times, and weather conditions. Weather conditions during these surveys were conducive to observing owls outside their burrows and detecting BUOW sign (e.g., avoided rain, high winds, or dense fog). In conformance with the MSHCP Survey Instructions, no rainfall events occurred during, or within five days prior to, the completion of the focused burrow surveys; and all surveys were conducted during the breeding season. The breeding season for BUOWs in the MSHCP area, per the Survey Instructions, is defined as March 1 to August 31.

Data was collected by the use of various equipment, such as hand-held Global Positioning System (GPS), standardized data forms, photographs, and aerial imagery field maps. Both biologists also used binoculars and spotting scopes, especially during the second and third phases of the survey (see further details of the survey components, as detailed below). In addition to noting suitable owl habitat, potential roost/nesting sites, and the presence or absence of owls and/or their sign, the biologists recorded all species seen and heard, with the primary focus being on birds (see Appendix A).

The MSHCP Survey Instructions consist of three phases, or "steps" (i.e., the habitat assessment, the focused burrow survey, and the focused owl survey). These are described in the following subsections.

2.1 Habitat Assessment

Prior to beginning the habitat assessment, the County's BUOW Survey Area was overlain on maps showing the Project's survey area (with built-in 300-foot biological buffer area). The result was a series of BUOW survey area polygons, with each being assigned a subarea number for data collection purposes. Maps were then generated and utilized by the BUOW surveyors. These same maps were later revised based on results of the burrow survey to complete the final focused BUOW survey (Figure 3). Each BUOW survey area throughout the entire Project was then assessed for potential suitability as BUOW habitat between April 22 and May 31, 2011. Some areas were inaccessible by foot (i.e., too steep, private property, etc.); and therefore, these areas were assessed from a short distance utilizing binoculars and spotting scopes. For each potential BUOW survey area, general survey

Table 1. Survey Data

Date	Surveyor	Habitat Suitability Assessment	Focused Burrow Survey	Focused Owl Survey	Time	Weather Conditions	
						Temp. (°F)	Wind speed (mph)
4/22/11	TS, DW	✔			0700-1500	50s to 60s	0-8
4/25/11	DW	✔			0810-1500	60-70s	0-3
4/26/11	TS	✔			0745-1445	58-78	0-10
4/27/11	TS	✔			0650-1445	65-90	0-6
4/28/11	TS	✔			0740-1200	63-80	0-8
5/31/11	TS, DW	✔			0830-1520	70-85	0-6
6/2/11	TS, DW		✔	✔	1220-2000	77-69	0-7
6/3/22	TS, DW		✔	✔	0555-1400	54-78	0-6
6/6/11	TS, DW		✔	✔	0600-1340	53-75	0-8
6/7/11	TS, DW		✔		1030-1400	66-75	0-2
6/8/11	TS			✔	0540-0750	58-59	0-1
6/9/11	TS			✔	0545-0745	59-60	0-1
6/17/11	TS, DW			✔	0530-0730	60-61	0-5
6/20/11	TS			✔	0520-0700	55-58	0-1
6/21/11	TS			✔	0630-0740	66-70	0-1

Surveyors: Tim Searl (TS), Doug Willick (DW)

information was collected, such as Project section, subarea number, observer, date, time, and weather conditions. Additionally, habitat characteristics were recorded for each subarea (including plant community type, vegetative cover and height, topography, degree of human disturbance, perch sites, etc.) and whether burrows/fossorial mammals were observed. Each subarea was then determined to be either suitable or unsuitable based on the habitat characteristics.

Areas with potential BUOW habitat in the Project's survey area included an abandoned horse ranch, vacant lots and fallow fields, grasslands, pastures, fuel modification zones along roadways, areas with low open scrub, and lots that had been graded for future housing development. Potentially suitable habitat for BUOWs is defined in the MSHCP as including, but not being limited to:

Native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf-courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas.

2.2 Focused Burrow Survey

A focused burrow survey was conducted in all areas of the Project Area that contained suitable habitat for the owl. This phase of the survey examined all natural burrows or suitable man-made structures that could be used for burrows by owls (such as described in Section 1.2 of this report). A systematic survey for burrows, including owl sign, was conducted by walking through all suitable habitat in the Project Area. In order to obtain a 100 percent visual inspection of the ground surface, transects were walked at 100-foot intervals, with transect widths reduced when necessary to account for irregular terrain or vegetative cover that limited ground surface visibility. The location of all potentially suitable BUOW burrows, owl sign, and any owls observed was noted and mapped, including GPS coordinates. Examples of BUOW sign, which may be present at burrow entrances or favored perch sites, might include owl pellets ("castings"), feathers, whitewash, or prey remains. In addition, BUOWs are known to often "decorate" their burrow entrances with dried horse or cow manure.

Where no potential burrow sites were found in areas of otherwise potentially suitable BUOW habitat, no further surveys were conducted (or are required by the MSHCP Survey Instructions). The focused burrow survey was conducted for the Project during the period of June 2 through 7, 2011.

2.3 Focused Burrowing Owl Survey

This last step of the BUOW survey is the actual focused search for owls in areas that have been previously identified in Steps 1 and 2 as having appropriate habitat and the presence of suitable burrow sites. A complete owl survey consists of a minimum of four site visits to all appropriate areas. In compliance with Survey Instructions, the surveys were conducted during periods of the day when BUOWs are most likely to be seen at or near their burrows or perches. These time periods are identified as from one hour before sunrise to two hours after sunrise, and from two hours before sunset to one hour after sunset. During this phase of the survey, all suitable BUOW habitat, potential perch sites, and burrow locations were examined by scanning with binoculars and/or spotting scopes and inspecting the areas on foot.

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3.0 RESULTS

As part of the review of existing BUOW data for areas in and adjacent to the Project, the California Natural Diversity Data Base (CNDDB) was consulted. Six records are shown for BUOW observations within approximately one mile or less from the Project site. All records are since 2005, although it is not known if these sites currently remain suitable for BUOWs. One of these CNDDB records is for the Sedco Hills (west of Mission Trail), and the remainder are for the Menifee area, in the vicinity of Murrieta Road. All but one of the CNDDB records are for birds observed during the breeding season and include pairs and family groups.

The following subsections discuss the results of the BUOW habitat assessment, focused burrow survey, and focused BUOW survey.

3.1 Habitat Assessment

The majority of the habitat assessment survey areas associated with 500-kV T/L section of the Project was considered unsuitable for BUOWs. This was primarily due to steep terrain and fairly dense vegetation, which was dominated by Riversidean sage scrub. In the more level terrain associated with the proposed Alberhill Substation, a high percentage of the former horse ranch was now dominated by tall, dense mustard (*Brassica* sp.*, Herschfeldia* sp.) and other ruderal species. Only one fairly small area with relatively sparse weedy cover, on the east side of the former horse ranch property, was identified as potentially suitable BUOW habitat (Appendix C).

In the proposed 115-kV Sub T/L and alternative 115-kV Sub T/L sections of the Project, a few dozen areas were identified as having potentially suitable BUOW habitat, though some of these were considered marginally suitable due to the presence of moderately tall non-native grasses and weeds. The remainder of the 115-kV Sub T/L alignments did not have suitable habitat for BUOWs due to development, rugged terrain, dense weed-dominated vegetation, dense scrub communities, and riparian or other woodland communities (Appendix C).

During the habitat assessment, no BUOWs or sign for this species were identified.

3.2 Focused Burrow Survey

The focused burrow survey was conducted in accordance with the MSHCP Survey Instructions. Numerous potential BUOW burrows were detected on both the 500-kV and 115-kV (proposed and alternative) sections of the Project Area. These were mostly identified as California ground squirrel burrows, although a few suitable burrows appeared to have been created by larger fossorial mammals (e.g., coyotes, fox, etc.). Other suitable burrow sites occasionally included culverts, pipes, and crawl spaces at the base of rock piles. Burrows were found to be distributed fairly consistently throughout the survey areas for the Project. Some of the areas with larger concentrations of burrows, along the proposed 115-kV Sub T/L, included the open fields adjacent to Franklin Street, east of Lake Elsinore; various locations along the west side of Mission Trail, near the intersection of Bundy Canyon Road and Murrieta Road, and at various locations along Murrieta Road. Along the 115-kV Sub T/L, one area with a higher concentration of potential BUOW burrows was along Byers Road, south of Craig Avenue (Appendix C).

3.3 Focused Owl Survey

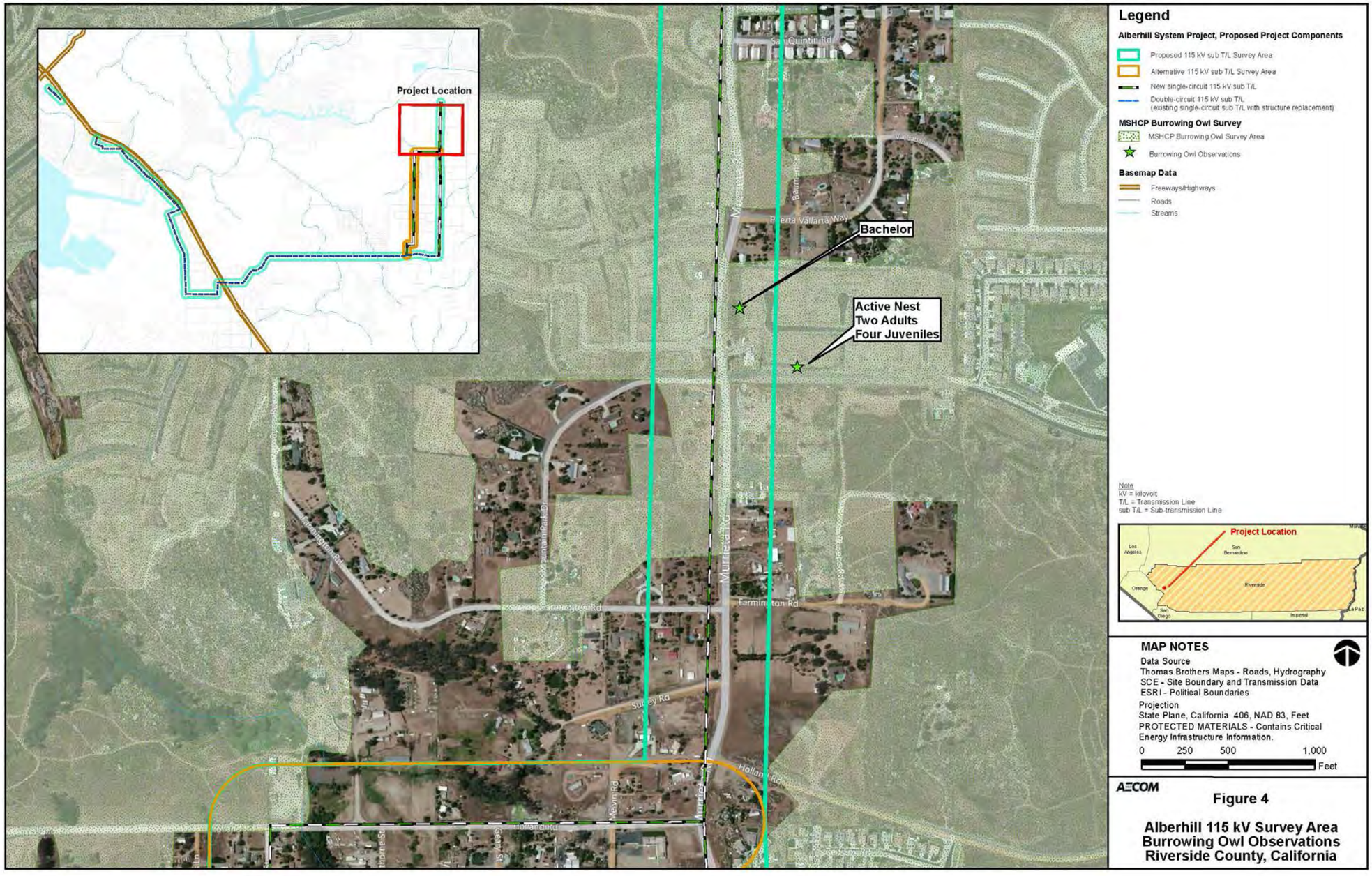
The focused owl survey was completed in accordance with MSHCP Survey Instructions. Throughout all sections of the Project, approximately 67.1 acres of potentially suitable BUOW habitat (i.e., areas containing appropriate owl habitat, along with the presence of suitable burrow sites) was surveyed.

BUOWs were detected at one of the BUOW survey areas identified for the Project. This site was just east of Murrieta Road and just north of its junction with La Piedra Road (Figure 4). Two BUOW territories, approximately 450 feet apart, were first noted at this location on June 7, 2011. One of the occupied burrows was within the Survey Area, about 100 feet east of Murrieta Road. It was situated along the east-facing side of a manufactured earthen berm separating Murrieta Road from several acres of graded pads and paved roads that appear to be the site of a future tract home development. This burrow site was occupied by what appeared to be a lone adult owl. During the course of the focused owl surveys, this site was again visited on June 8, 17, 20, and 21, and each time only one adult owl was seen.

The second BUOW territory at this location involved a family group comprised of two adults and four juvenile owls (Figure 4). This group was using a cluster of burrows on a north-facing manufactured berm just north of La Piedra Road. This site was approximately 450 feet southeast of the other owl location and about 250 feet outside the Survey Area. The family group was also noted during the four focused BUOW survey visits to this area, as noted above. The area surrounding these two BUOW territories include a mix of rural residential, a busy roadway (Murrieta Road), several additional areas of graded pads for future residential tracts, and a few areas of existing tract homes.

CNDDB field survey forms were filled out and submitted to CDFG for the BUOW observations associated with this focused survey (Appendix B).

A total of 74 species of birds was detected, visually or aurally, during this focused BUOW survey (Appendix A). One of the species encountered during the survey, the coastal California gnatcatcher (*Polioptila californica californica*) (CAGN), is recognized by U.S. Fish and Wildlife Service (USFWS) as a federally threatened species. On June 3, 2011, during a focused burrow survey, one individual CAGN was present in scrub habitat about 150 feet southwest of the BUOW survey area. This area was dominated by chamise chaparral vegetation, which appeared to be recovering from a fire. The bird foraged in this habitat, generally being about 100 feet south of the biological survey area for the Project. The bird displayed behavioral characteristics, as well as plumage features, that were indicative of a dispersing juvenile. This area was very close to a riparian bird survey area for the Project, and no CAGNs had been heard or seen in this area during previous visits in 2010 and 2011.


Project Location
Bachelor
Active Nest
Two Adults
Four Juveniles
Puerta Vallarta Way
Farmington Rd
Hollandale Rd
Melvin Rd
Murrieta Rd
Legend
Alberhill System Project, Proposed Project Components
Proposed 115 kV sub T/L Survey Area
Alternative 115 kV sub T/L Survey Area
New single-circuit 115 kV sub T/L
Double-circuit 115 kV sub T/L
(existing single-circuit sub T/L with structure replacement)
MSHCP Burrowing Owl Survey
MSHCP Burrowing Owl Survey Area
Burrowing Owl Observations
Basemap Data
Freeways/Highways
Roads
Streams
Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line
Project Location
Los Angeles
San Bernardino
Orange
Riverside
San Diego
Imperial
La Paz
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 250 500 1,000
Feet
AECOM
Figure 4
Alberhill 115 kV Survey Area
Burrowing Owl Observations
Riverside County, California

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4.0 POTENTIAL IMPACTS AND MITIGATION

This section presents a general impact discussion of the potential types of impacts that may result from the proposed Project on BUOWs and the resources upon which they depend. These impacts may result from such activities as clearing and grubbing, site preparation/grading, stockpiling, construction of access roads, equipment storage and other forms of construction disturbance, as well as long-term operational and maintenance impacts. Impacts are defined as activities associated with the Project that destroy, damage, alter, or otherwise affect biological resources in the Project Area. As defined in the following subsections, these may be classified as long or short term impacts, as well as direct or indirect impacts.

4.1 General Impact Categories

Direct impacts occur when biological resources, such as habitat for special-status species, are altered, disturbed, destroyed, or removed during the course of project implementation. Examples of direct impacts are removal of breeding or foraging habitat for wildlife or the removal of a special interest species as a result of construction-related activities; increased noise and other startle effects during construction; or fugitive dust generation. Direct impacts on biological resources associated with this Project could result from grubbing or grading for access and spur roads, the preparation of temporary equipment staging areas and stockpile locations, the drilling of tower support footings, and the on-going maintenance of facilities.

Indirect impacts occur when project-related activities affect biological resources in a manner other than direct. Potential indirect impacts include the increased risk of wildfires; and the exacerbation or introduction of non-native, invasive weeds as a result of project-related soil disturbance. Chronic indirect impacts to biological resources resulting from the operation of a project can include, among others, noise, lighting, and increased human presence. These indirect disturbances may cause area wildlife to disperse or avoid the affected area. Therefore, indirect impacts may have the potential to adversely affect special status wildlife such as BUOWs.

Long-term impacts occur as a result of construction and have a lasting effect on biological resources after construction is completed. The loss of foraging or breeding habitat for a special status species as a result of the installation of new utility infrastructure (e.g., substations, tower sites, or access roads) would be considered a permanent, long-term impact. Periodic operations and maintenance activities over the lifetime of the project, including travel along right-of-way, would be a long-term impact.

Short-term impacts may occur during construction and have a temporary effect on biological resources. Though an impact may be a direct impact, it may be short-term and temporary if mitigation measures ensure that impacts would be avoided, minimized, or restored to the extent practicable. Many short-term impacts may also be considered temporary impacts. These impacts are reversible with implementation of mitigation measures (e.g., revegetation of an area that had been temporarily impacted by construction) or cessation of the source of a disturbance.

4.2 Thresholds for Determining Potential Significance

The primary sources for determining significance of impacts on biological resources are the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), along with various regional and local guidelines and ordinances such as the Natural Communities Conservation Act (NCCP) and the MSHCP. The Appendix G Guidelines under CEQA provide direction and interpretation for implementing CEQA statutes.

An adverse impact may meet the significance thresholds per CEQA when the project may impact plant and wildlife species listed by federal or state agencies as threatened or endangered, or a species of regional or local significance. A significant impact to listed or other special status species could be direct or indirect, with adverse impacts on suitable habitat for these species also potentially considered significant.

In general, the Project may have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or the USFWS;
- Substantially reduce the habitat of a plant or wildlife species;
- Cause a plant or wildlife population to drop below self-sustaining levels or threaten to eliminate a plant or animal community;
- Reduce the number or restrict the range of an endangered, rare, or threatened species;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.

4.3 Potential Impacts on Burrowing Owls

As identified in Section 3 of this report, BUOWs were found within and immediately adjacent to the Project's survey areas. Specific impacts on BUOWs, both direct and indirect, that could be associated with the Project include:

- Loss of foraging habitat and injury or mortality during Project implementation, such as when an occupied burrow is disturbed or removed during initial grubbing and grading.
- Introduction or increase of human activity into areas where owls may be present (i.e., within 250 feet during the breeding season and 160 feet during the non-breeding season), which may alter normal behavior patterns and sometimes result in displacement of birds.
- Introduction of exotic or invasive plants or animals; e.g., the introduction of certain invasive weed species may cause previously suitable owl habitat to become unsuitable.
- Attraction of new potential predators on BUOWs (e.g., other raptors that may perch or nest in poles or tower sites).

- Temporary and/or permanent noise increases, which may alter normal behavior patterns and sometimes result in displacement of birds.

- Temporary and/or permanent increases in ambient night lighting associated with Project facilities or construction, which can result in higher incidents of predation on owls by other nocturnal predators.

- The potential for collision with, or electrocution by, the introduction of new overhead lines.

As impacts to BUOWs would typically be considered significant, certain avoidance, minimization, and mitigation measures are therefore recommended to reduce the impacts to below a level of significance.

4.4 Avoidance, Minimization and Mitigation Measures

As previously stated, the BUOW is a California Species of Special Concern. Live birds and active nests (i.e., nests with eggs or nestlings) of the BUOW are protected under the Federal Migratory Bird Treaty Act of 1918, and the California Fish and Game Code (Section 3503). The BUOW is also a covered species under the MSHCP, which has species-specific and site-specific conservation objectives. These objectives are considered necessary due to the specific habitat needs of the owl, its limited population size and distribution, and its need for relatively large tracks of suitable habitat to support its life history requirements and semi-colonial nature.

As BUOWs have been detected within and adjacent to the Project survey areas, avoidance, minimization, and mitigation measures are considered necessary to ensure against potential conflicts with the above state and federal statutes, and comply with regional conservation objectives for this species identified by the MSHCP. The following measures, therefore, include applicable guidelines from the California Burrowing Owl Consortium (1993), which are also endorsed by CDFG, as well as those from the MSHCP (as identified separately, below):

- The proposed project components should be designed to be raptor-safe in order to comply with SCE policy (ENV: Avian Protection On or Near Power lines).

- No burrow sites occupied by owls can be disturbed during the nesting season (February 1 to August 31) unless a qualified biologist approved by CDFG can: (1) document through non-invasive methods that the birds have not yet begun nesting (i.e., have not yet laid eggs); or (2) that juveniles from the nest site are foraging independently and are capable of survival independently of the adults.

- Where occupied burrow sites are present during the nesting season within areas that may be potentially impacted by the proposed Project, a buffer zone of at least 250 feet (75 m) should be established around the burrows and appropriately flagged and monitored (California Burrowing Owl Consortium 1993). Outside the breeding season, where occupied burrows can be avoided, a minimum 160-foot (50 m) buffer should be established around the active burrows to avoid disturbance to the birds. Avoidance of an active burrow also requires that a minimum of 6.5 acres of foraging habitat contiguous with the burrow site be permanently preserved.

- If outside the breeding season, and impacts to occupied burrows cannot be avoided, burrows in adjacent, suitable BUOW habitat (i.e., contiguous with foraging habitat of the affected owls) should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of at least 1:1.

- If BUOWs must be moved away from the disturbance area, passive relocation techniques should be used rather than actual trapping and relocation of the owls. A time period of at least one week is recommended to allow the owls to move and acclimate to alternate burrows.

4.4.1 MSHCP Conservation Objectives for Burrowing Owls

The MSHCP has provided species-specific conservation objectives for the BUOW which are based on the best available scientific information at the time of the MSHCP preparation. Pursuant to Section 5.0 of the MSHCP (Management, Monitoring and the Adaptive Management Program), the MSHCP's mitigation requirements will be monitored and analyzed to determine if they are producing the desired results. Based on this information, the species-specific objectives may be adjusted, if appropriate, as new information is gathered during Project implementation. The following conservation objectives are currently being provided by the MSHCP for projects where BUOWs are detected:

- *If the site is within the Criteria Area, then at least 90 percent of the area with long-term conservation value will be included in the MSHCP Conservation Area. Otherwise:*

    1. *If the site contains, or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than 3 pairs of burrowing owls, then the on-site burrowing owls will be passively or actively relocated following accepted protocols.*

    2. *If the site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat, and is non-contiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite.*

- *Pre-construction presence/absence surveys for BUOWs within the survey area where suitable habitat is present will be conducted for all Covered Activities through the life of the permit. Surveys will be conducted no more than 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season.* "Covered Activities", as defined in Volume 3, Section 3, of the MSHCP, refers to "*certain activities carried out or conducted by Permittees, Participating Special Entities, Third Parties Granted Take Authorization and others within the Plan Area, and described in Section 7.0 of the MSHCP, that will receive Take Authorization under the Section 10(a) Permit and the NCCP Permit, provided these activities are otherwise lawful.*

5.0 REFERENCES

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APPENDIX A

SPECIES LIST

Appendix A
WILDLIFE SPECIES LIST

The following is a list of wildlife species detected during the focused Burrowing Owl Survey for the Alberhill Systems Project. Nomenclature and taxonomy for birds follow the American Ornithologists' Union Seventh Edition of the Checklist of North American Birds (1998), with the most recent supplements.

Family and Common Name	Scientific Name
MAMMALS	
Geomyidae (Gophers)	
Botta's pocket gopher	*Thomomys bottae*
Leporidae (Rabbits and Hares)	
desert cottontail black-tailed jackrabbit	*Sylvilagus audubonii* *Lepus californicua*
Sciuridae (Squirrels, Chipmunks and allies)	
California ground squirrel	*Otospermophilus beecheyi*
BIRDS	
Anatidae (Swans, Geese and Ducks)	
mallard	*Anas platyrhynchos*
Phalacrocoracidae (Cormorants)	
double-crested cormorant	*Phalacrocorax auritus*
Ardeidae (Herons and Bitterns)	
great blue heron great egret snowy egret black-crowned night-heron	*Ardea herodias* *Ardea alba* *Egretta thula* *Nycticorax nycticorax*
Odontophoridae (New World Quail)	
California quail	*Callipepla californica*
Cathartidae (New World Vultures)	
turkey vulture	*Cathartes aura*
Accipitridae (Hawks, Kites, Eagles and allies)	
Cooper's hawk red-shouldered hawk red-tailed hawk	*Accipiter cooperii* *Buteo lineatus* *Buteo jamaicensis*
Falconidae (Caracaras and Falcons)	
American kestrel	*Falco sparverius*

Family and Common Name	Scientific Name
Caprimulgidae (Poorwills)	
lesser nighthawk	*Chordeiles acutipennis*
Charadriidae (Plovers)	
killdeer	*Charadrius vociferus*
Laridae (Gulls, Terns and Skimmers)	
California gull	*Larus californicus*
Columbidae (Pigeons and Doves)	
rock pigeon band-tailed pigeon Eurasian collared dove mourning dove	*Columba livia* - I *Patagioenas fasciata* *Streptopelia decaocto* - I *Zenaida macroura*
Cuculidae (Cuckoos, Roadrunners and allies)	
greater roadrunner	*Geococcyx californianus*
Strigidae (Typical owls)	
burrowing owl	*Athene cunicularia* - SSC
Caprimulgidae (Nightjars)	
lesser nighthawk	*Chordeiles acutipennis*
Apodidaie (Swifts)	
white-throated swift	*Aeronautes saxatalis*
Trochilidae (Hummingbirds)	
black-chinned Hummingbird Anna's hummingbird Costa's hummingbird	*Archilochus alexandri* *Calypte anna* *Calypte costae*
Picidae (Woodpecker)	
Nuttall's woodpecker downy woodpecker northern flicker	*Picoides nuttallii* *Picoides pubescens* *Colaptes auratus*
Tyrannidae (Tyrant Flycatchers)	
black phoebe Say's phoebe ash-throated flycatcher Cassin's kingbird western kingbird	*Sayornis nigricans* *Sayornis saya* *Myiarchus cinerascens* *Tyrannus verticalis* *Tyrannus vociferans*
Corvidae (Ravens, Crows, Jays and allies)	
western scrub-jay American crow common raven	*Aphelocoma californica* *Corvus brachyrhynchos* *Corvus corax*

Family and Common Name	Scientific Name
Alaudidae (Larks)	
horned lark	*Eremophila alpestris*
Hirundinidae (Swallows)	
northern rough-winged swallow cliff swallow	*Stelgidopteryx serripennis* *Petrochelidon pyrrhonota*
Paridae (Chickadees and Titmice)	
mountain chickadee	*Poecile gambeli*
Aegithalidae (Bushtits)	
bushtit	*Psaltriparus minimus*
Troglodytidae (Wrens)	
Bewick's wren house wren	*Thryomanes bewickii* *Troglodytes aedon*
Polioptilidae (Gnatcatchers)	
California gnatcatcher	*Polioptila californica* - FT
Turdidae (Thrushes)	
American robin	*Turdus migratorius*
Mimidae (Mockingbirds and Thrashers)	
northern mockingbird California thrasher	*Mimus polyglottos* *Toxostoma redivivum*
Sturnidae (Starlings)	
European starling	*Sturnus vulgaris* - I
Ptilogonatidae (Silky-flycatchers)	
phainopepla	*Phainopepla nitens*
Parulidae (Wood Warblers)	
yellow warbler (CSC) common yellowthroat	*Dendroica petechia* - SSC *Geothlypis trichas*
Emberizidae (Sparrows and allies)	
spotted towhee rufous-crowned sparrow California towhee lark sparrow sage sparrow song sparrow	*Pipilo maculatus* *Aimophila ruficeps* *Melozone crissalis* *Chondestes grammacus* *Amphispiza belli* *Melospiza melodia*
Cardinalidae (Cardinals, Grosbeaks and allies)	
western tanager black-headed grosbeak blue grosbeak lazuli bunting	*Piranga ludovicianus* *Pheucticus melanocephalus* *Passerina caerulea* *Passerina amoena*

Family and Common Name	Scientific Name
Icteridae (Blackbirds, Orioles and Allies)	
red-winged blackbird	*Agelaius phoeniceus*
western meadowlark	*Sturnella neglecta*
Brewer's blackbird	*Euphagus cyanocephalus*
brown-headed cowbird	*Molothrus ater*
Bullock's oriole	*Icterus bullockii*
hooded oriole	*Icterus galbula*
Fringillidae (Finches)	
purple finch	*Carpodacus purpureus*
house finch	*Carpodacus mexicanus*
American goldfinch	*Spinus tristis*
lesser goldfinch	*Spinus psaltria*
Lawrence's goldfinch	*Spinus lawrencei*
Passeridae (Old World Sparrows)	
house sparrow	*Passer domesticus* - I
REPTILES	
Phrynosomatidae (Spiny Lizards, Horned Lizards and allies)	
western fence lizard	*Sceloporus occidentalis*
granite spiny lizard	*Sceloporus orcutti*
side-blotched lizard	*Uta stansburiana*
Teiidae (Whiptail Lizards)	
western whiptail	*Aspidoscelis tigris*

Legend

FT A USFWS federally threatened species

SSC A CDFG California Species of Special Concern (for breeding sites)

I Introduced (non-native) specie

APPENDIX B

CNDDB Field Survey 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): 06/17/2011

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: *Athene cunicularia*

Common Name: Burrowing Owl

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

Total No. Individuals 1 Subsequent Visit? ☑ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: AECOM (Doug Willick and Tim Searl)
Address: 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matt.malle@aecom.com
Phone: (909) 579-3050

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
1				

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

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

County: Riverside Landowner / Mgr.: Private
Quad Name: Romoland Elevation: 1485 feet
T 6s R 3w Sec 4, SW ¼ of NW ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): ArcMap 10
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model N/A
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy N/A meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 480923E, 3726589N

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):*

Habitat is a historically (~within last five years?) graded lot that was graded for the purpose of constructing a residential lot. Plant Communities: Non-native grassland and disturbed coastal sage scrub. Dominants: Hirschfeldia incana and Lotus scoparius. Associates: Eriogonum fasciculatum, Lotus purshianus, Lessingia filaginifolia, Conyza canadensis. One adult BUOW was observed perched on top of a granite boulder near burrow entrance. Then flew approximately 20 feet and perched on the ground near burrow entrance. Burrow was located at the base of a granite boulder.

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: Vacant graded lots, residential, elementary school, and major roadways (i.e., Murrieta Road)

Visible disturbances: Area is a graded lot.

Threats: Weed abatement, vehicle strikes, domestic dogs/cats, future development

Comments: Burrow was located in an east-facing manufactured 2:1 slope.

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: Sight ID

Photographs: *(check one or more)*

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

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

DFG/BDB/1747 Rev. 6/16/09

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

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

Date of Field Work (mm/dd/yyyy): 06/17/2011

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Athene cunicularia*

Common Name: Burrowing Owl

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

Total No. Individuals 6 Subsequent Visit? ☑ yes ☐ no

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

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: AECOM (Doug Willick and Tim Searl)
Address: 901 Via Piemonte, 5th Floor
Ontario, CA 91764
E-mail Address: matt.malle@aecom.com
Phone: (909) 579-3050

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

2	4			
# 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: Riverside Landowner / Mgr.: Private
Quad Name: Romoland Elevation: 1485 feet
T 6s R 3w Sec 4, SW ¼ of NW ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): ArcMap 10
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model N/A
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy N/A meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 481024E, 3726485N

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):*

Habitat is a historically (~within last five years?) graded lot that was graded for the purpose of constructing a residential lot. Plant Communities: Non-native grassland and disturbed coastal sage scrub. Dominants: Hirschfeldia incana and Lotus scoparius. Associates: Heterotheca grandiflora, Eriogonum fasciculatum, Lotus purshianus, Lessingia filaginifolia, Conyza canadensis. Two adult and 4 juvenile BUOW observed near burrow entrance. Adults were perched on top of granite boulders immediately adjacent to the burrow entrance. One adult was observed "flycatching" and feeding young near the burrow entrance. Juveniles exited the burrow to take food then returned into the burrow.

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: Vacant graded lots, residential, elementary school, and major roadways (i.e., Murrieta Road)

Visible disturbances: Area is a graded lot.

Threats: Weed abatement, vehicle strikes, domestic dogs/cats, future development

Comments: Burrow was located in between two granite boulders in a north-facing manufactured 2:1 slope.

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: Sight ID

Photographs: *(check one or more)*

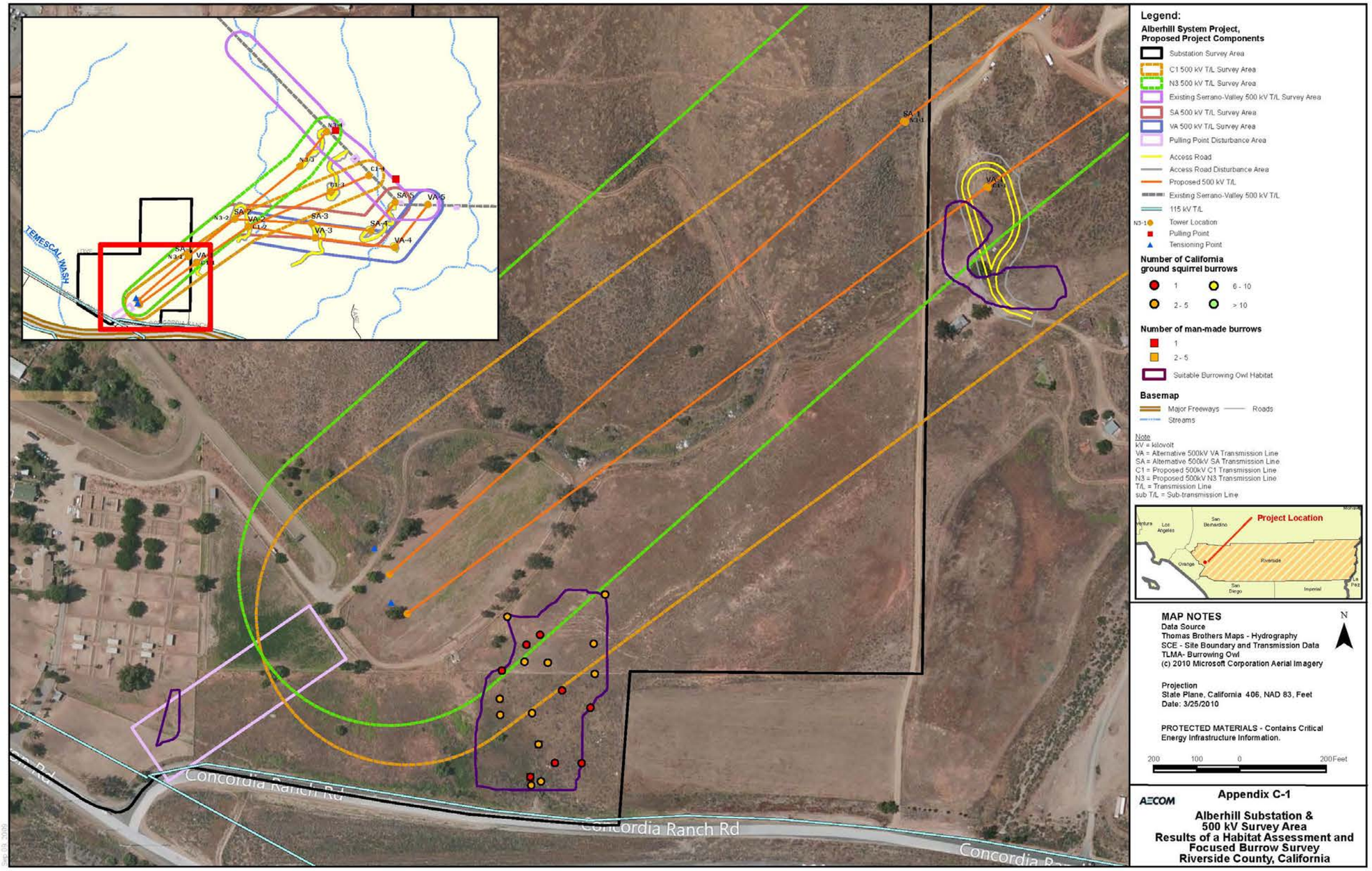
	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

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

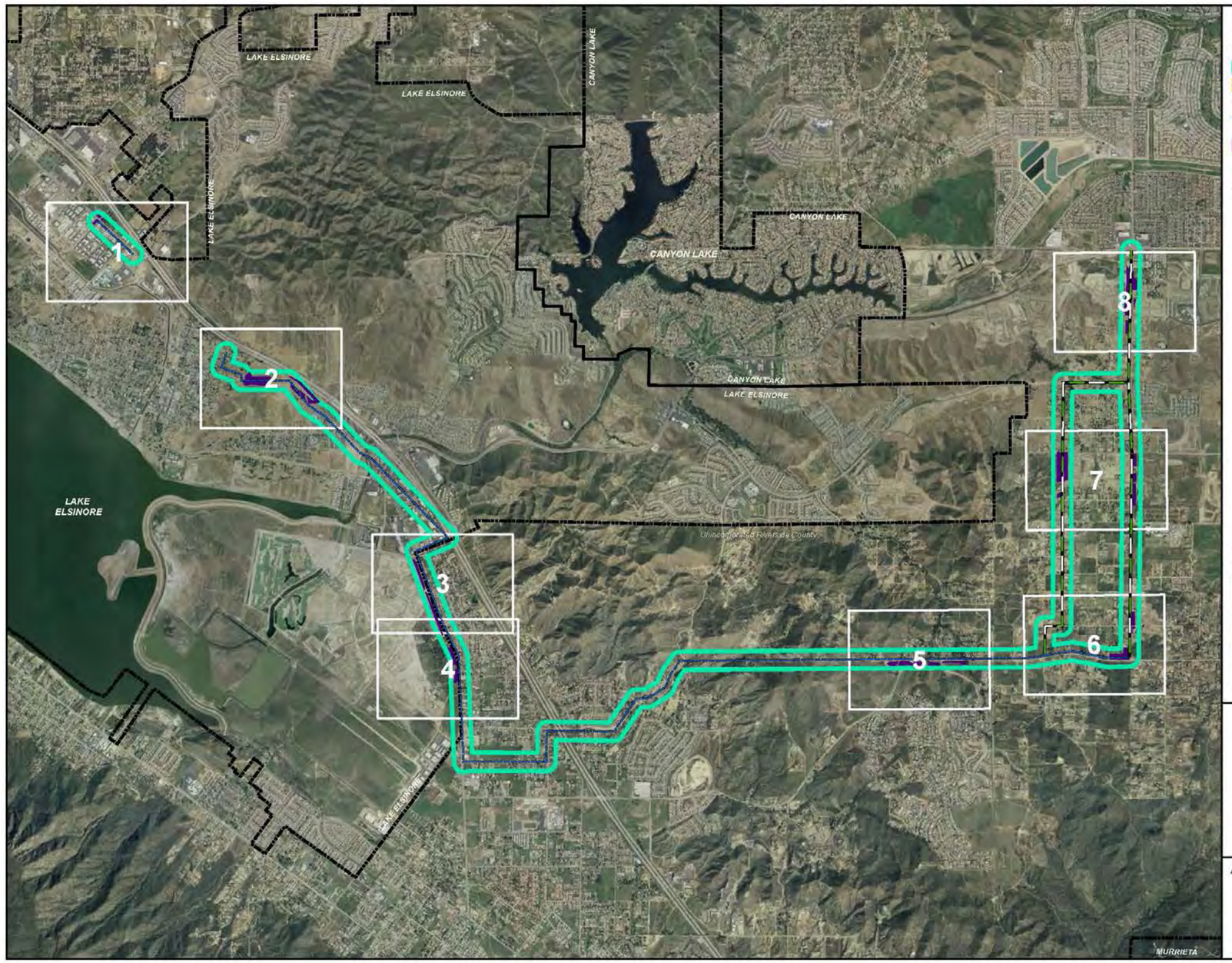
DFG/BDB/1747 Rev. 6/16/09

APPENDIX C

Focused Habitat Assessment and Burrow Survey Results



Path: Z:\Projects\2011_surveys\Alberhill\ArcGIS\Final\BUOW\500 kv habitat assessment.mxd



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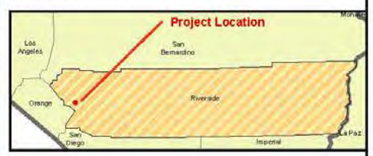
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)
- Suitable Burrowing Owl Habitat

Basemap Data

- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

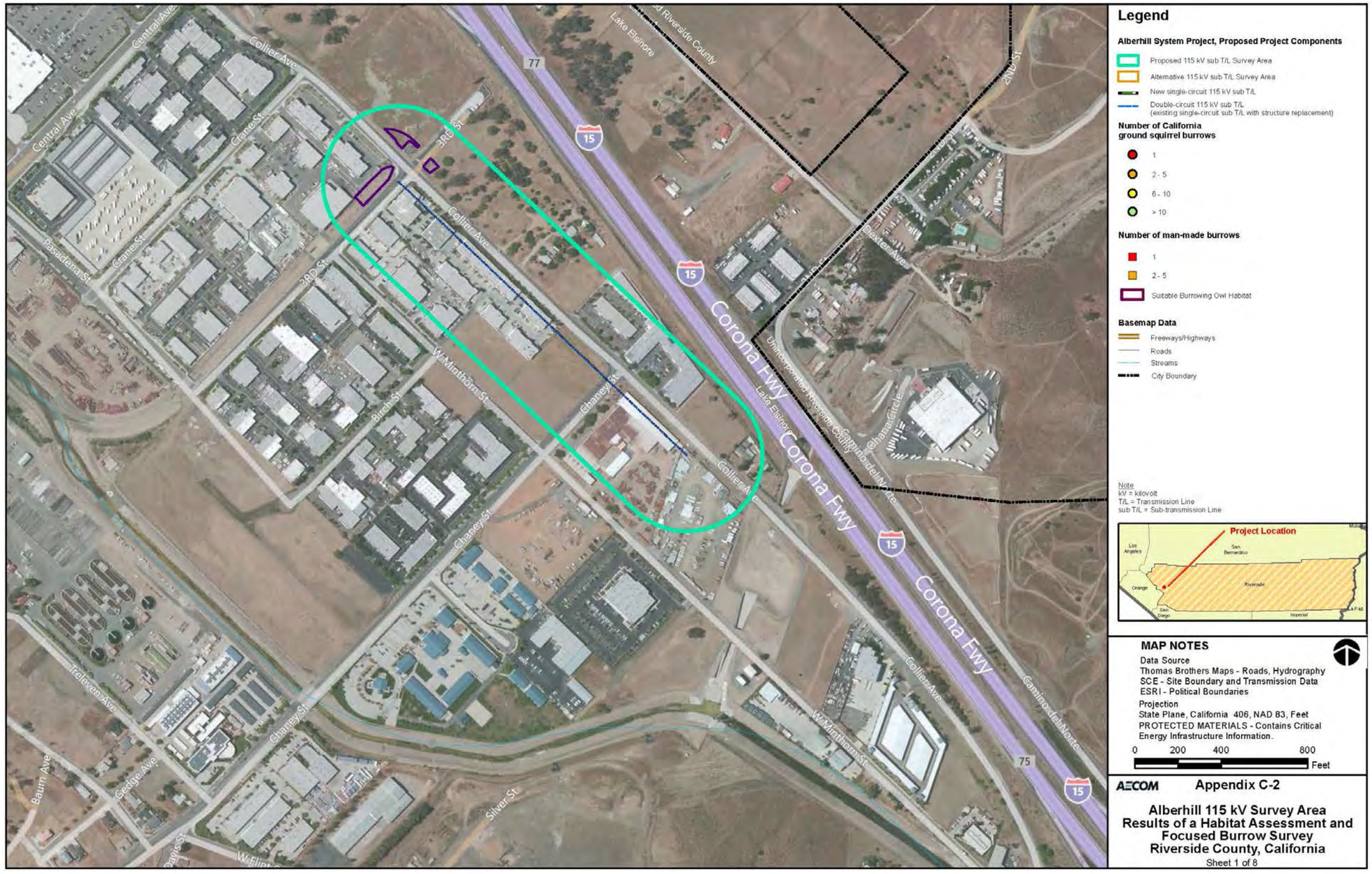
0 0.25 0.5 1 Miles

AECOM

Appendix C-2

Alberhill 115 kV Survey Area
Results of a Habitat Assessment and Focused Burrow Survey
Riverside County, California
Index Map

Path: Z:\Projects\2011 surveys\Alberhill\mxd\GIS\Final\Bio\W115 kv habitat assessment mapping INDEX.mxd



Legend

Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

Number of California ground squirrel burrows

- 1
- 2 - 5
- 6 - 10
- > 10

Number of man-made burrows

- 1
- 2 - 5

Suitable Burrowing Owl Habitat

Basemap Data

- Freeways/Highways
- Roads
- Streams
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line

MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 200 400 800 Feet

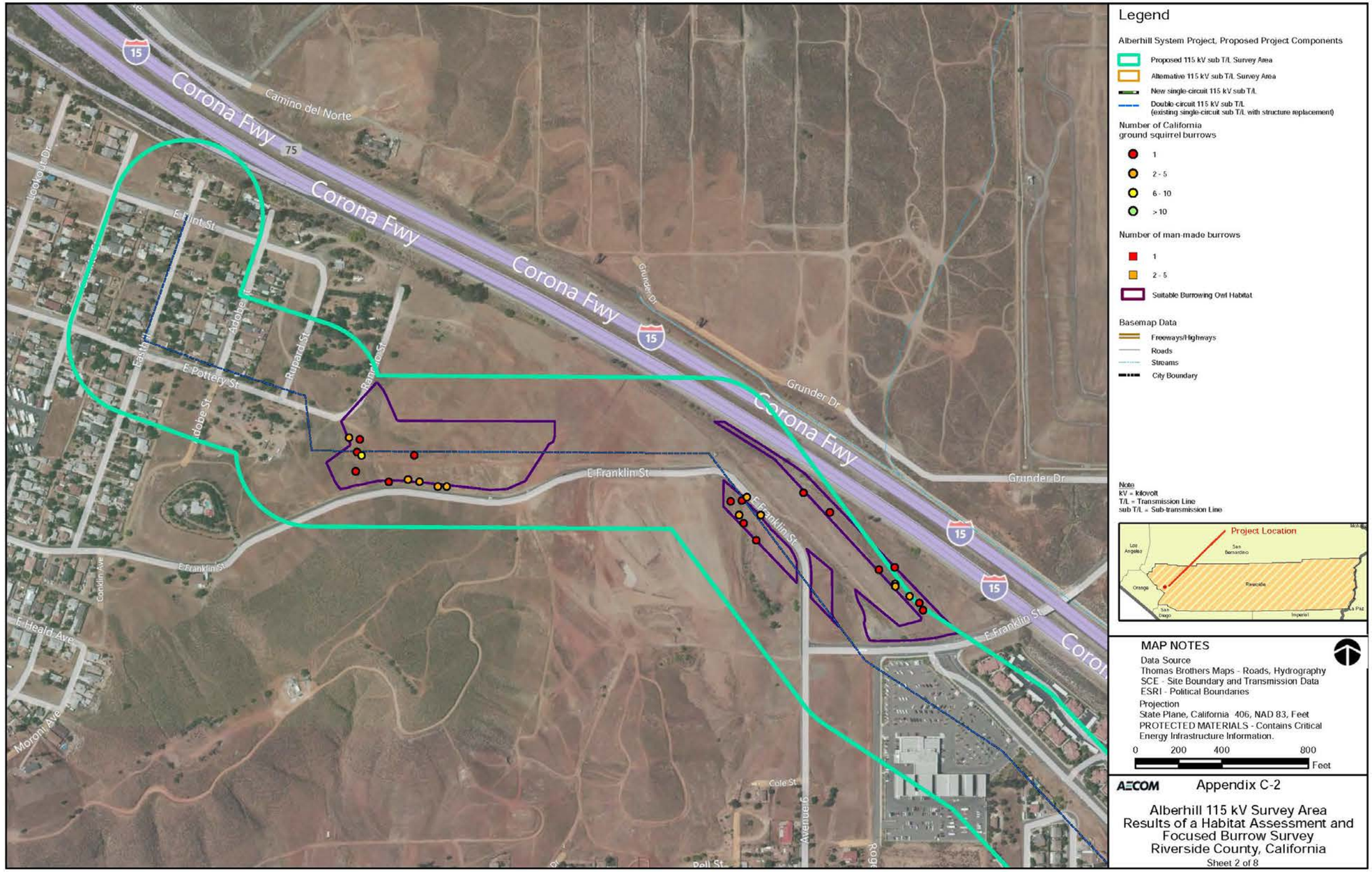
AECOM

Appendix C-2

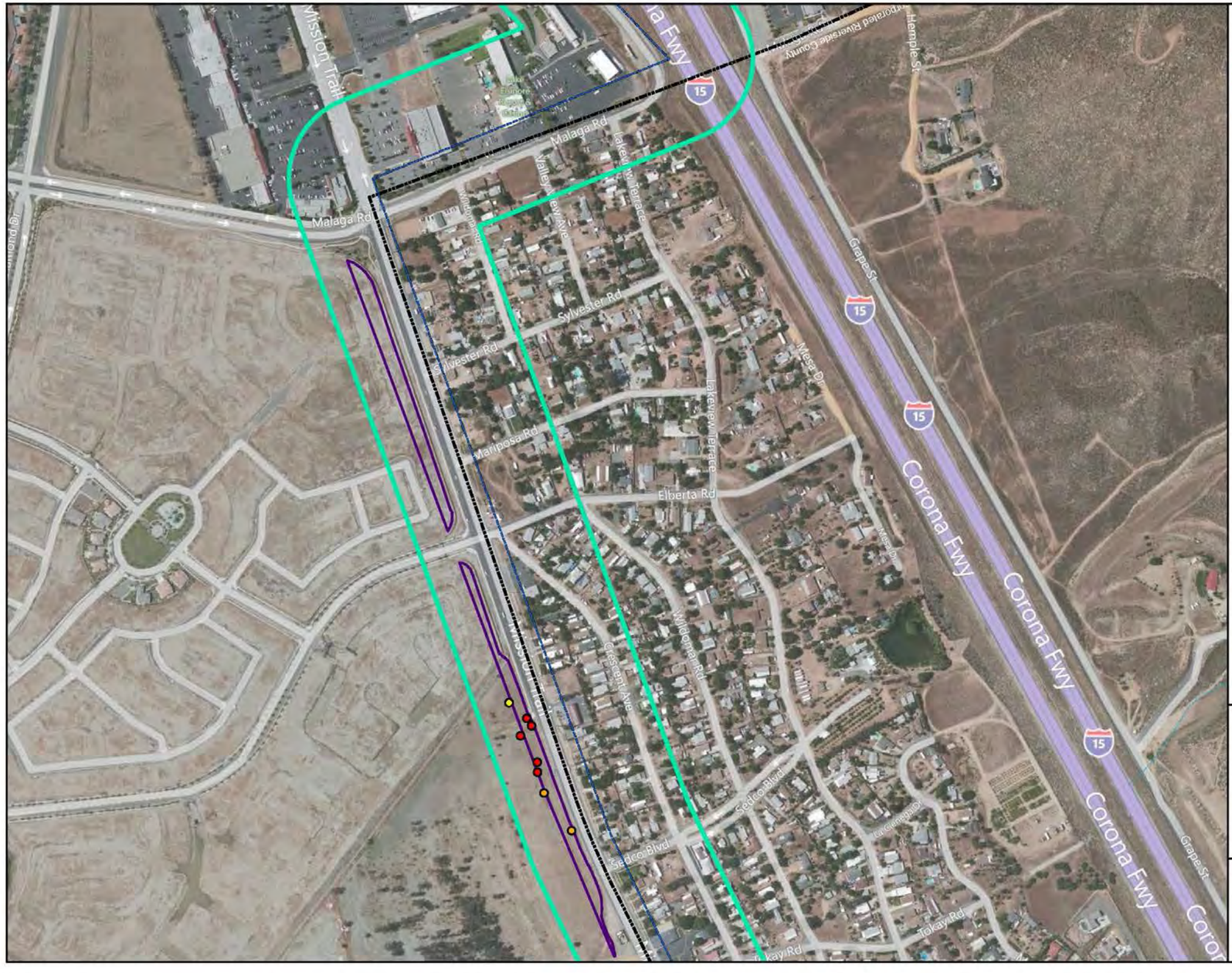
Alberhill 115 kV Survey Area
Results of a Habitat Assessment and Focused Burrow Survey
Riverside County, California

Sheet 1 of 8

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Path: Z:\Projects\2011 surveys\Alberhill\ArcGIS\Final\BUOW\115 kv habitat assessment mapbook.mxd



Legend

Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

Number of California ground squirrel burrows

- 1
- 2 - 5
- 6 - 10
- > 10

Number of man-made burrows

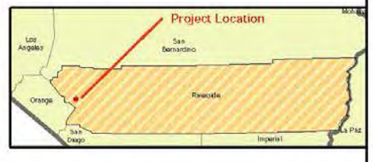
- 1
- 2 - 5

Suitable Burrowing Owl Habitat

Basemap Data

- Freeways/Highways
- Roads
- Streams
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 200 400 800
Feet

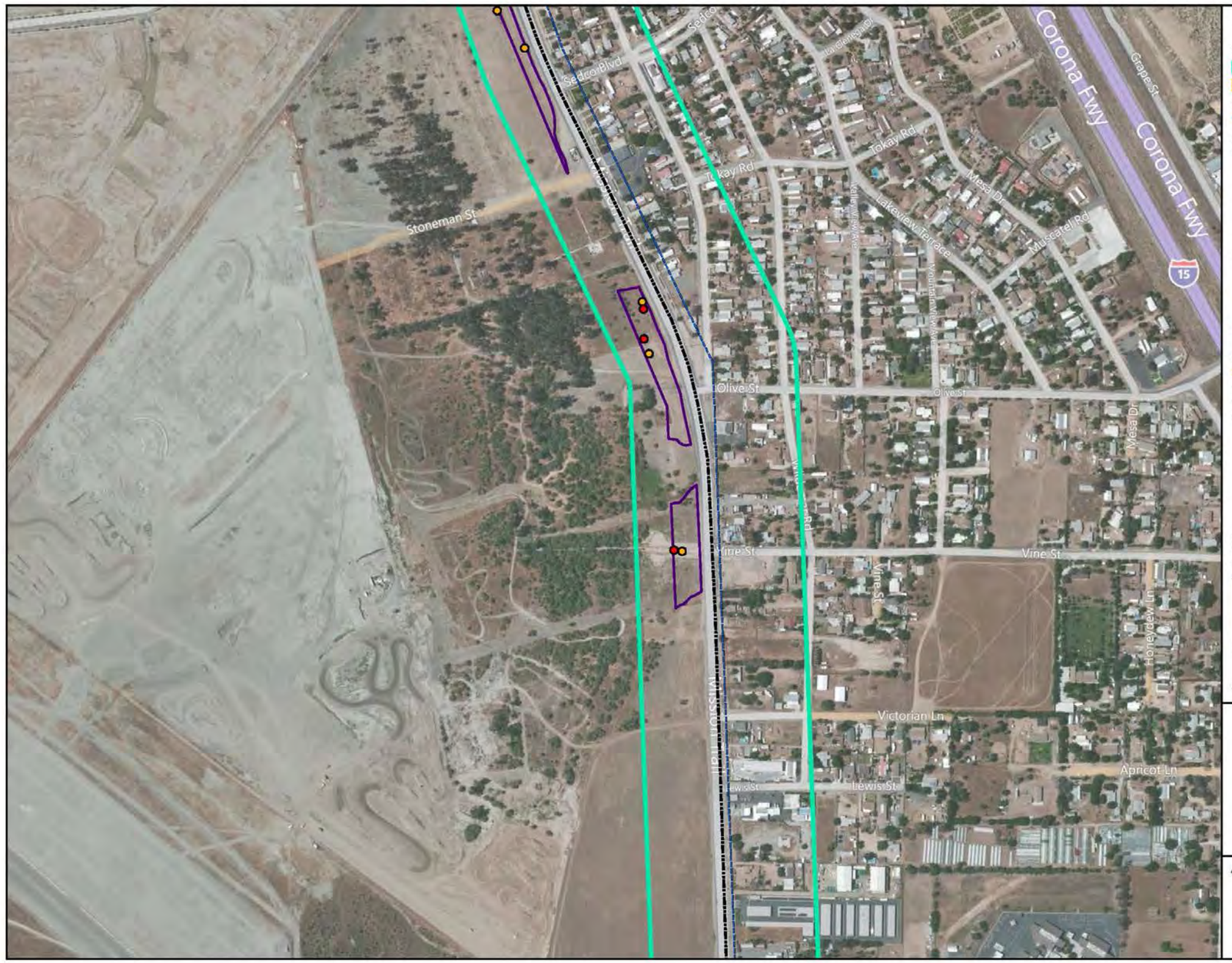
AECOM

Appendix C-2

Alberhill 115 kV Survey Area
Results of a Habitat Assessment and Focused Burrow Survey
Riverside County, California

Sheet 3 of 8

Path: Z:\Projects\2011 surveys\Alberhill\ArcGIS\Final\BUOW\115 kv habitat assessment mapbook.mxd



Legend

Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

Number of California ground squirrel burrows

- 1
- 2 - 5
- 6 - 10
- > 10

Number of man-made burrows

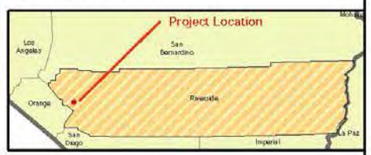
- 1
- 2 - 5

Suitable Burrowing Owl Habitat

Basemap Data

- Freeways/Highways
- Roads
- Streams
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 200 400 800
Feet

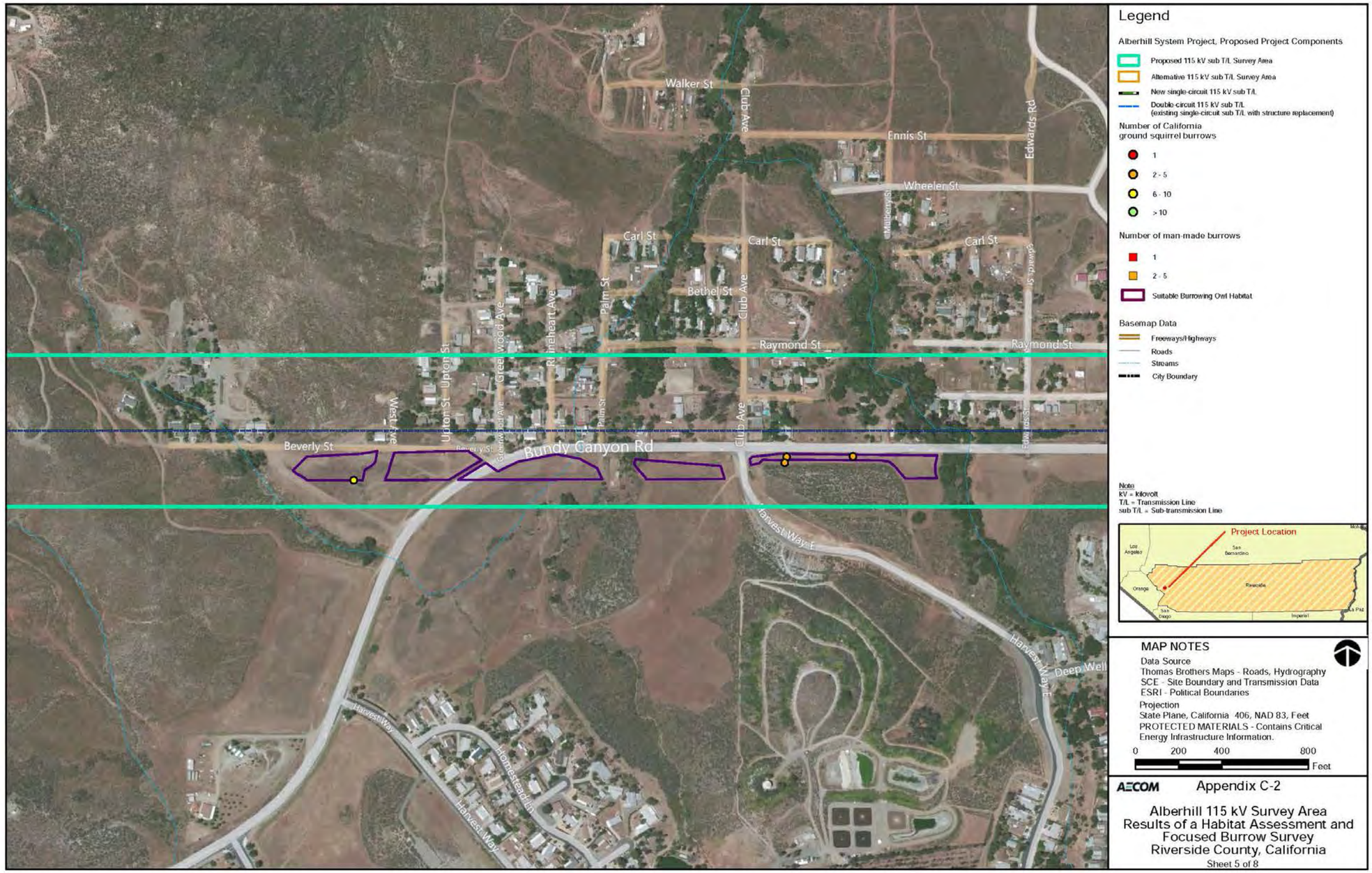
AECOM

Appendix C-2

Alberhill 115 kV Survey Area
Results of a Habitat Assessment and Focused Burrow Survey
Riverside County, California

Sheet 4 of 8

Path: Z:\Projects\2011 surveys\Alberhill\ArcGIS\Final\BUOW\115 kv habitat assessment mapbook.mxd



Legend

Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

Number of California ground squirrel burrows

- 1
- 2 - 5
- 6 - 10
- > 10

Number of man-made burrows

- 1
- 2 - 5

Suitable Burrowing Owl Habitat

Basemap Data

- Freeways/Highways
- Roads
- Streams
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line

MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 200 400 800
Feet

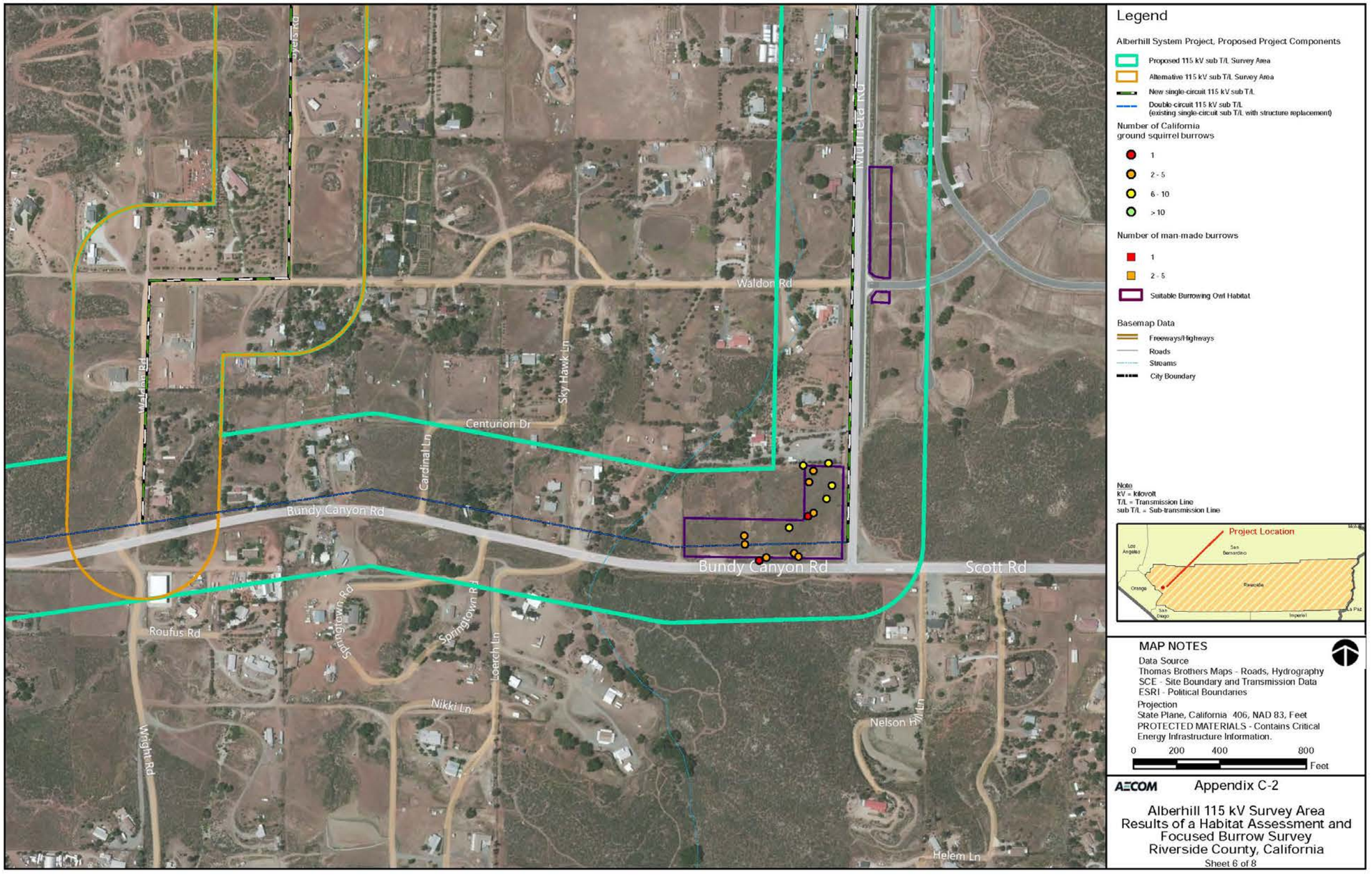
AECOM

Appendix C-2

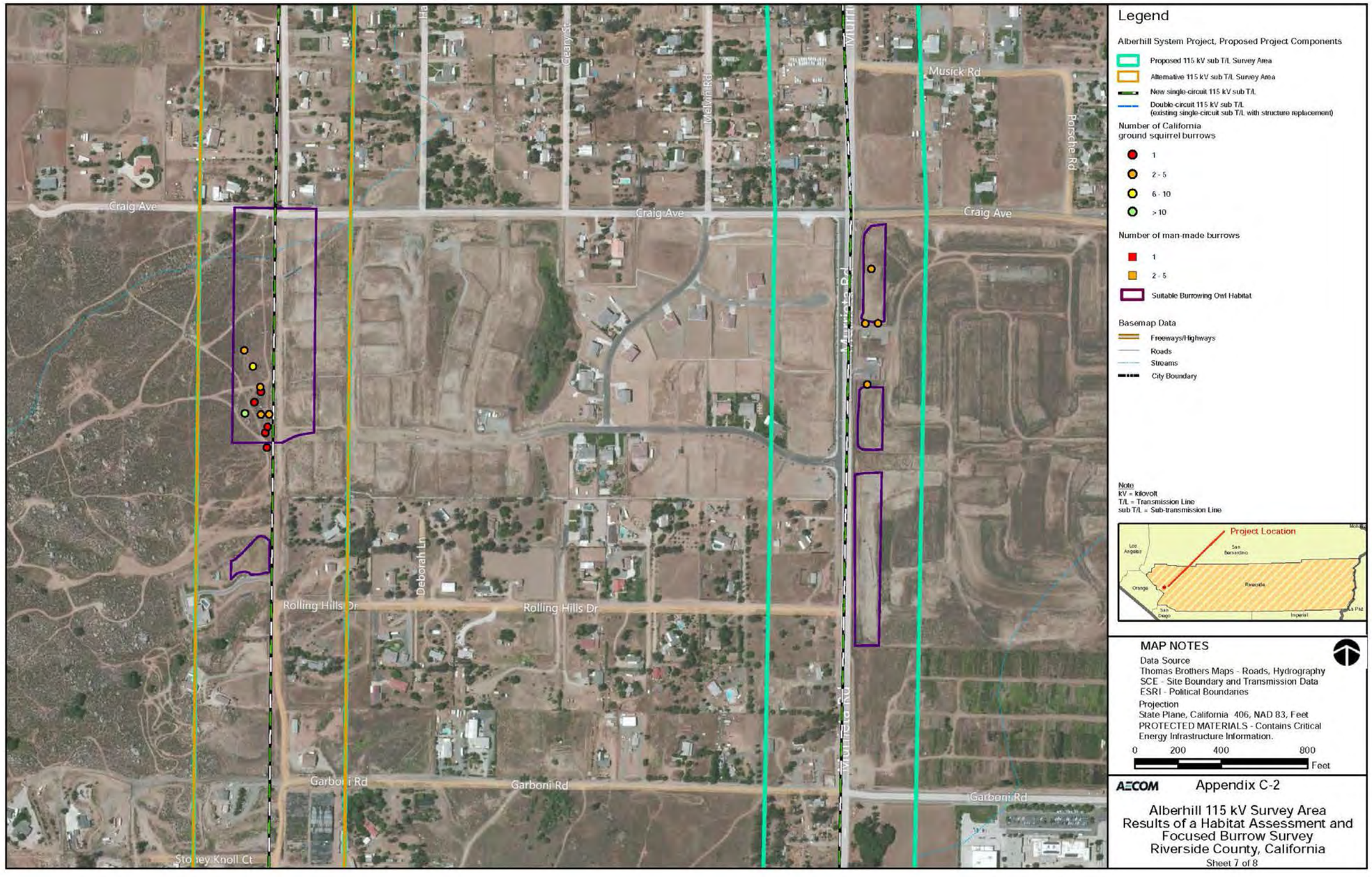
Alberhill 115 kV Survey Area
Results of a Habitat Assessment and Focused Burrow Survey
Riverside County, California

Sheet 5 of 8

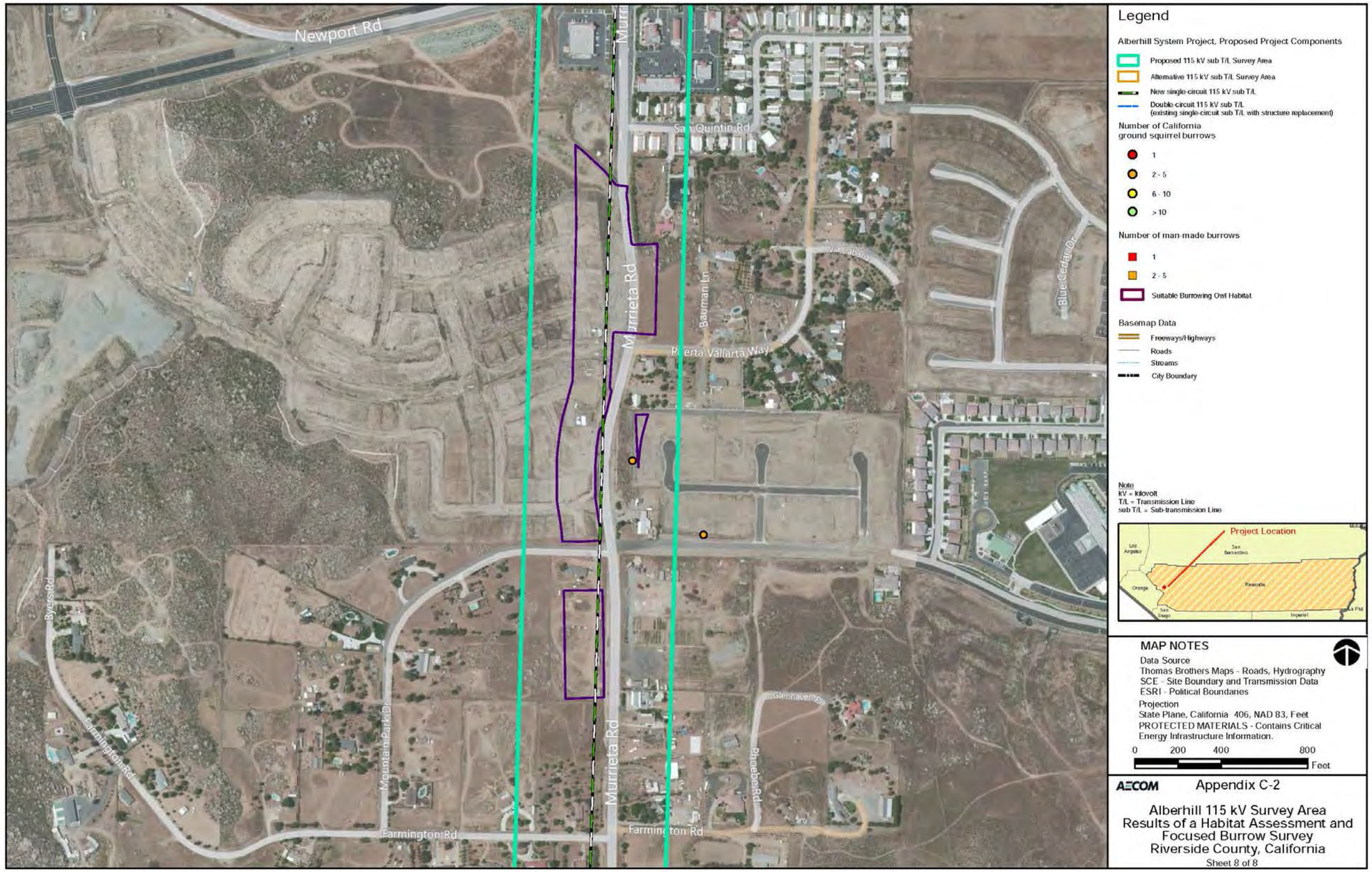
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APPENDIX D

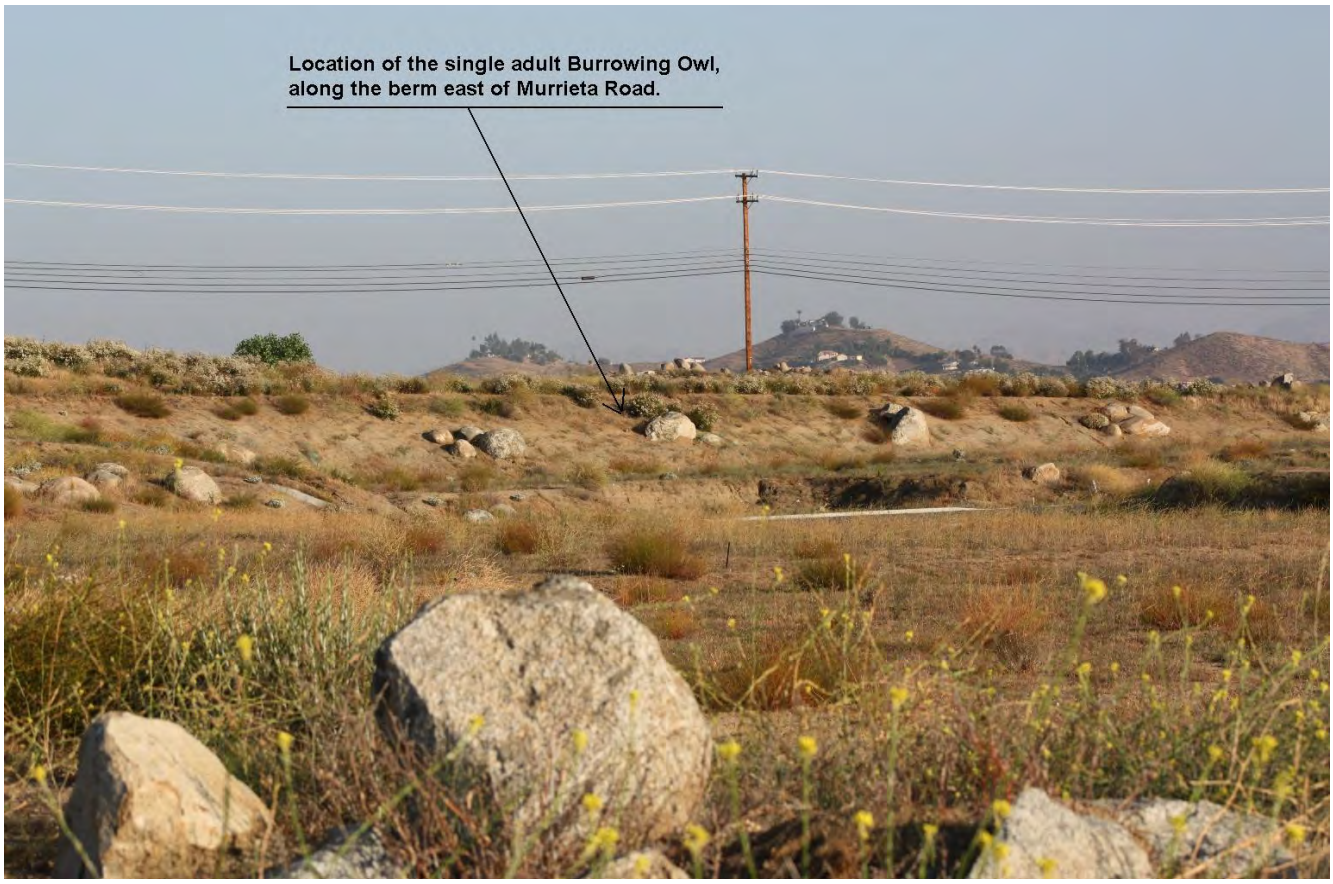
Site Photographs



An adult Burrowing Owl (presumed to be the male) from the nesting pair with four young along La Piedra Road. Photo taken June 8, 2011.



Another view of one of the adult Burrowing Owls from the pair with a family group. Photo taken June 20, 2011.



View of the graded pads, from La Piedra Road on the south, looking northwest towards Murrieta Road in the distance. The location of the single adult owl is depicted in the photo. The location of the family group was along the north side of the berm in the foreground (towards left edge of photo). Photo depicts the fairly open habitat, and overall relatively level terrain of the site. Photo taken June 20, 2011.



View of two of the Burrowing Owls from the family group discovered at their nest site along La Piedra Road, in Menifee. Depicted here is an adult on the right, presumed to be the female, and one of the four juveniles. Photo taken June 7, 2011.



View of one of the adult owls from the two territories that were located on graded pads just east of Murrieta Road and north of La Piedra Road, in the city of Menifee. Looking E/NE from near the west side of the graded pads. Photo taken June 20, 2011.



View of the single adult (presumed unpaired) Burrowing Owl near its burrow (at base of rock). The burrow was located along the east-facing side of a berm, approximately 100 feet east of Murrieta Road. Photo taken June 20, 2011.



Representative photos of sites within the 115 kV Burrowing Owl survey area that were considered to have potentially suitable owl habitat, though where no owls or owl sign was detected.



Representative photos of sites within the 115 kV Burrowing Owl survey area that were considered to have potentially suitable owl habitat, though where no owls or owl sign was detected.



Representative photos of sites within the 115 kV Burrowing Owl survey area that were considered to have potentially suitable owl habitat, though where no owls or owl sign was detected.



Representative photo from the 500kV Burrowing Owl survey area, above the proposed Alberhill Substation, that was not considered suitable for owls.

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September 22, 2011

Ms. Adelina Muñoz
Southern California Edison
Biologist/Project Manager
Biologist and Archeological Resources Group
1218 South Fifth Street
Monrovia, CA 91016

Mr. Matthew Mallé AECOM
Biologist/Project Manager 901 Via Piemonte
5th Floor
Ontario, CA 91764

Subject: Reptile Cover Board Production and Placement Effort in Support of the Alberhill System Project

Dear Ms. Muñoz:

Submitted herewith are the methods and results of the reptile cover board production and placement effort conducted in support of the Alberhill System Project.

Introduction

AECOM produced and placed reptile cover boards within the Alberhill System Project (the Project) 500-kiloVolt (kV) transmission line (T/L) survey area. The purpose of placing the reptile cover boards is to establish artificial thermoregulation sites to assist in the daily sweep of biological monitoring for sensitive diurnal reptile species that have the potential to occur within proximity to each of the proposed 500-kV T/L tower locations during the execution phase of the Project. Sensitive diurnal reptile species are defined as those species covered under the Western Riverside County Multiple Species Habitat Conservation Plan and/or those afforded protection under the California and/or Federal Endangered Species Act.

Sensitive diurnal reptile species that have the potential to occur within the Project's proposed and alternative 500-kV T/L survey area include:

Belding's orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), coastal western whiptail (*Cnemidophorus tigris multiscutatus*), granite spiny lizard (*Sceloporus orcutti*), northern red-diamond rattlesnake (*Crotalus ruber ruber*), San Diego horned lizard (*Phrynosoma coronatum blainvillii*), and southern sagebrush lizard (*Sceloporus graciosus vandenburgianus*).

Methods

Production

AECOM constructed 56 reptile cover boards to be placed within the Project's 500-kV T/L survey area. The cover boards were constructed with plywood. Each cover board was stenciled to identify it as belonging to a SCE biological study. In addition, a handle, for safe flipping, and a tag containing a unique identification number were affixed to each of the cover boards.

Placement

The cover boards were hand carried into each of the proposed and alternative 500-kV T/L tower locations (14 tower locations in total). Four cover boards were placed within 100 feet of each tower location, one in each cardinal direction. Placement of cover boards was contingent upon whether grasslands with fossorial animal burrows were present. Cover board placement was adjusted to ideal locations to produce positive results. At each placement location, the following environment condition information was collected:

- Date
- Unique ID number
- Biologist placing the board
- Dominant vegetation cover (General and top 3 species observed)
- Whether fossorial mammal burrows were present
- General soil type
- Slope (expressed in percentages)
- Aspect of slope the board was placed
- Representative photo

Results

The cover boards were produced on June 3, 2011. The cover boards were placed by AECOM biologists Tim Searl, Bryan Chevillet, and Matthew Mallé on June 6, June 13, and June 16, 2011. The results of the placement can be reviewed in Attachment 1, Reptile Cover Board Placement Result Table and Attachment 2, Reptile Cover Board Placement Figure. Photos of each cover board can be reviewed in Attachment 3, Reptile Cover Board Placement Photos.

If you have any questions or comments concerning the production or placement of the reptile cover boards, please contact Matthew Malle, Matthew.Malle@AECOM.com or 909-579-3561.

Regards,

Matthew Mallé
Biologist/Project Manager

Attachments:

Attachment 1, Reptile Cover Board Placement Figure
Attachment 2, Reptile Cover Board Placement Result Table
Attachment 3, Reptile Cover Board Placement Photos

Attachment 1:
Reptile Cover Board Placement Figure

Attachment 2:
Reptile Cover Board Placement Result Table

Attachment 3:
Reptile Cover Board Placement Photos



Cover Board 30, associated with Proposed Alberhill 500-kV T/L Tower Location VA-3, aspect west



Cover Board 31, associated with Proposed Alberhill 500-kV T/L Tower Location SA-3, aspect west



Cover Board 32, associated with Proposed Alberhill 500 kV T/L Tower Location SA-3, aspect northwest



Cover Board 33, associated with Proposed Alberhill 500-kV T/L Tower Location C1-2, aspect west



Cover Board 34, associated with Proposed Alberhill 500-kV T/L Tower Location C1-2, aspect south



Cover Board 35, associated with Proposed Alberhill 500-kV T/L Tower Location VA-3, aspect west



Cover Board 36, associated with Proposed Alberhill 500-kV T/L Tower Location VA-3, aspect northeast



Cover Board 37, associated with Proposed Alberhill 500-kV T/L Tower Location N3-4, aspect north



Cover Board 38, associated with Proposed Alberhill 500-kV T/L Tower Location N3-4, aspect northeast



Cover Board 39, associated with Proposed Alberhill 500-kV T/L Tower Location N3-4, aspect west



Cover Board 40, associated with Proposed Alberhill 500-kV T/L Tower Location N3-4, aspect northwest



Cover Board 41, associated with Proposed Alberhill 500-kV T/L Tower Location C1-3, aspect north



Cover Board 42, associated with Proposed Alberhill 500-kV T/L Tower Location C1-3, aspect northeast



Cover Board 43, associated with Proposed Alberhill 500-kV T/L Tower Location C1-3, aspect northwest



Cover Board 44, associated with Proposed Alberhill 500-kV T/L Tower Location VA-3, aspect southwest



Cover Board 45, associated with Proposed Alberhill 500-kV T/L Tower Location SA-5, aspect northeast



Cover Board 46, associated with Proposed Alberhill 500-kV T/L Tower Location SA-5, aspect north.



Cover Board 47, associated with Proposed Alberhill 500-kV T/L Tower Location SA-3, aspect south.



Cover Board 48, associated with Proposed Alberhill 500-kV T/L Tower Location C1-3, aspect northwest.



Cover Board 49, associated with Proposed Alberhill 500-kV T/L Tower Location VA-4, aspect northeast.



Cover Board 50, associated with Proposed Alberhill 500-kV T/L Tower Location VA-4, aspect northwest.



Cover Board 51, associated with Proposed Alberhill 500-kV T/L Tower Location SA-5, aspect northeast.



Cover Board 52, associated with Proposed Alberhill 500-kV T/L Tower Location SA-5, aspect north.



Cover Board 53, associated with Proposed Alberhill 500-kV T/L Tower Location N3-2, aspect west.



Cover Board 54, associated with Proposed Alberhill 500-kV T/L Tower Location C1-2, aspect west.



Cover Board 55, associated with Proposed Alberhill 500-kV T/L Tower Location VA-4, aspect northeast.



Cover Board 56, associated with Proposed Alberhill 500-kV T/L Tower Location VA-4, aspect northwest.



Cover Board 57, associated with Proposed Alberhill 500-kV T/L Tower Location N3-2, aspect west.



Cover Board 58, associated with Proposed Alberhill 500-kV T/L Tower Location N3-2, aspect northwest.



Cover Board 59, associated with Proposed Alberhill 500-kV T/L Tower Location C1-2, aspect east.



Cover Board 60, associated with Proposed Alberhill 500-kV T/L Tower Location N3-2, aspect west.



Cover Board 61, associated with Proposed Alberhill 500-kV T/L Tower Location N3-3, aspect southwest.



Cover Board 62, associated with Proposed Alberhill 500-kV T/L Tower Location N3-3, aspect northeast.



Cover Board 63, associated with Proposed Alberhill 500-kV T/L Tower Location N3-3, aspect east.



Cover Board 64, associated with Proposed Alberhill 500-kV T/L Tower Location N3-3, aspect northeast.



Cover Board 65, associated with Proposed Alberhill 500-kV T/L Tower Location C1-4, aspect west.



Cover Board 66, associated with Proposed Alberhill 500-kV T/L Tower Location C1-4, aspect west.



Cover Board 67, associated with Proposed Alberhill 500-kV T/L Tower Location C1-4, aspect northwest.



Cover Board 68, associated with Proposed Alberhill 500-kV T/L Tower Location C1-4, aspect west.



Cover Board 69, associated with Proposed Alberhill 500-kV T/L Tower Location VA-5, aspect east.



Cover Board 70, associated with Proposed Alberhill 500-kV T/L Tower Location VA-5, aspect southwest.



Cover Board 71, associated with Proposed Alberhill 500-kV T/L Tower Location VA-5, aspect southwest.



Cover Board 72, associated with Proposed Alberhill 500-kV T/L Tower Location VA-5, aspect southwest.



Cover Board 73, associated with Proposed Alberhill 500-kV T/L Tower Location SA-4, aspect south.



Cover Board 74, associated with Proposed Alberhill 500-kV T/L Tower Location SA-4, aspect west.



Cover Board 75, associated with Proposed Alberhill 500-kV T/L Tower Location SA-4, aspect west.



Cover Board 76, associated with Proposed Alberhill 500-kV T/L Tower Location SA-4, aspect northeast.



Cover Board 77, associated with Proposed Alberhill 500-kV T/L Tower Location C1-1, aspect east.



Cover Board 78, associated with Proposed Alberhill 500-kV T/L Tower Location C1-1, aspect northeast.



Cover Board 79, associated with Proposed Alberhill 500-kV T/L Tower Location C1-1, aspect north.



Cover Board 80, associated with Proposed Alberhill 500-kV T/L Tower Location C1-1, aspect southwest.



Cover Board 81, associated with Proposed Alberhill 500-kV T/L Tower Location N3-1, aspect southwest.



Cover Board 82, associated with Proposed Alberhill 500-kV T/L Tower Location N3-1, aspect southwest.



Cover Board 83, associated with Proposed Alberhill 500-kV T/L Tower Location N3-1, aspect west.



Cover Board 84, associated with Proposed Alberhill 500-kV T/L Tower Location N3-1, aspect southeast.



Cover Board 85, associated with Proposed Alberhill 500-kV T/L Tower Location SA-3, aspect northwest.

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September 1, 2011

Ms. Adelina Munoz
Southern California Edison
265A
1218 South Fifth Avenue
Monrovia, CA 91016

Subject: Submittal of the Draft Alberhill System Project Stephens' Kangaroo Rat and Los Angeles Pocket Mouse Focused Survey Report

Dear Adelina,

I am pleased to sumbit the Draft Alberhill System Project Stephens' Kangaroo Rat and Los Angeles Pocket Mouse Focused Survey Report.

The Stephens' kangaroo rat (SKR) and Los Angeles pocket mouse (LAPM) focused surveys were conducted in July and August 2011 by SJM Biological Consultants Inc.

According to the focused survey two separate populations of SKR were detected on the proposed Alberhill Substation survey area and three separate populations of SKR were detected within the Alberhill alternative 115 kV sub T/L survey area. No LAPM were detected during the survey.

As requested, the report is being submitted in Microsoft Word. Please review the attached report and let me know if you have any questions or comments

Sincerely,

Matthew Malle
Project Manager/Biologist
Matthew.Malle@AECOM.com

Attachment: SJM Biological Consultants, Inc., Draft, Alberhill System Project, Stephens' Kangaroo Rat and Los Angeles Pocket Mouse Focused Survey Report

SJM BIOLOGICAL CONSULTANTS

27 August 2011 SJMBC.835

Matthew Malle
AECOM
901 Via Piemonte, 5th Floor
Ontario, CA 91764
909.579.3050

SUBJECT: Results of a 2011 final habitat assessment and follow-up trapping surveys for the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) and State Sensitive Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) (LAPM) at the Southern California Edison (SCE) Alberhill System Project 115kv Sub-transmission Line (hereafter "**115kv**") and Substation and 500kv Transmission Line (hereafter "**Substation**") project areas, in Riverside County, California (Figure 1).

Dear Mr. Malle:

At the request of AECOM, the above-described field study was conducted by SJM Biological Consultants between 12 July and 6 August 2011. The purpose of the assessment and trapping surveys was to provide SCE with information concerning the presence/absence of these two sensitive species in areas of potential substation and transmission line installations, to allow for informed decisions regarding the final locations of these features.

INTRODUCTION AND SITE DESCRIPTION

The current project encompasses two separate areas, as follows.

Area 1 - Substation

The **Substation** project area consists of lands in the immediate vicinity of Alberhill that are proposed for the construction of a substation and associated power lines. This area occurs immediately north of Interstate 15 (I15), to the north and northwest of Lake Street in Riverside County, California. NAD 83 UTM coordinates near the center of the proposed substation are 11 6461860E/3732899N, and near the center of the proposed potential transmission line alignments 11 0463259E/3733529N. The property occurs in Sections 9, 10, 15 and 16, Range 5 West, Township 5 South, on the Alberhill USGS 7.5' Quadrangle, in Riverside County, California. Elevation in the project area ranges from approximately 1175-2000 feet (Figure 2).

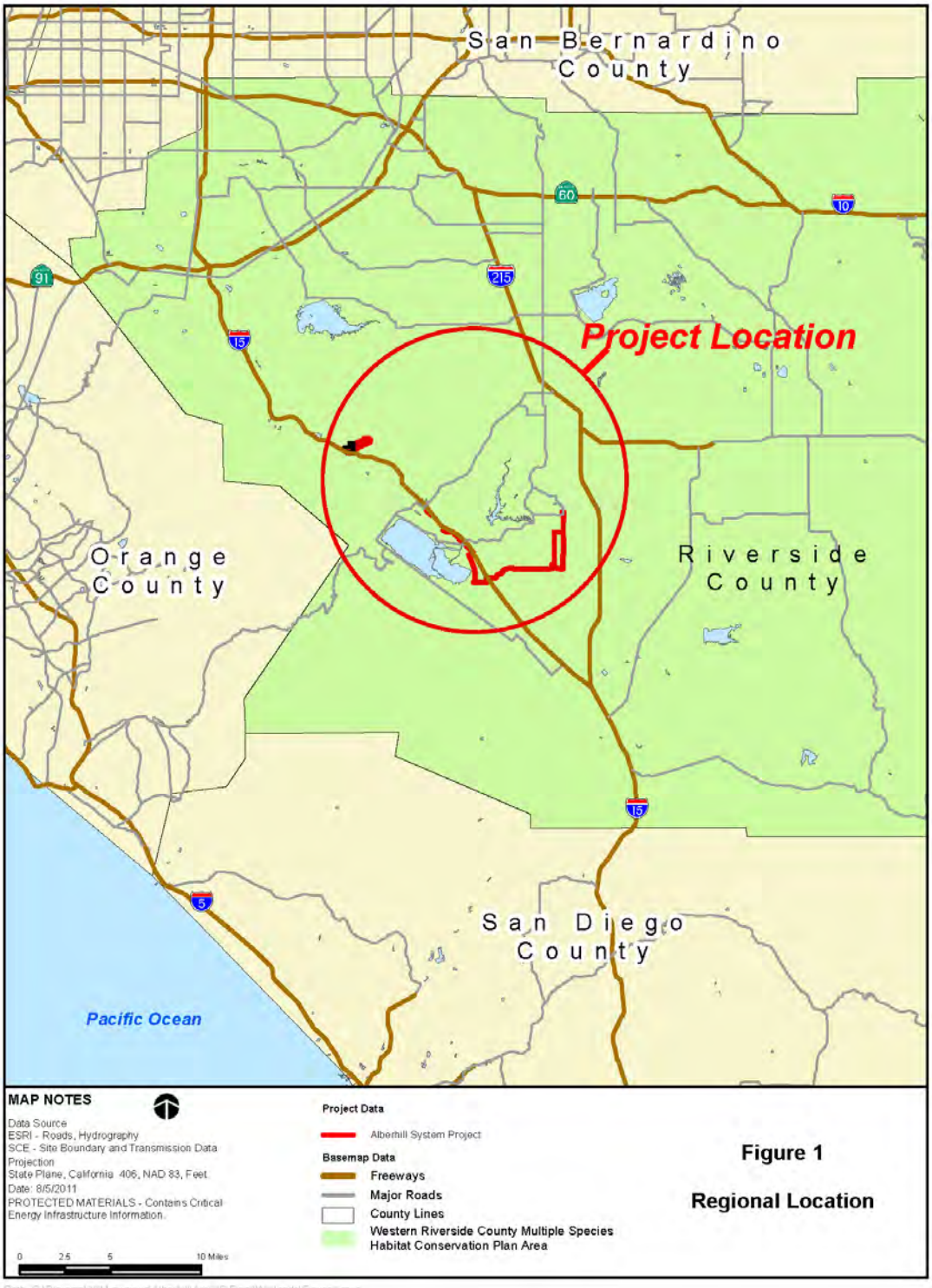
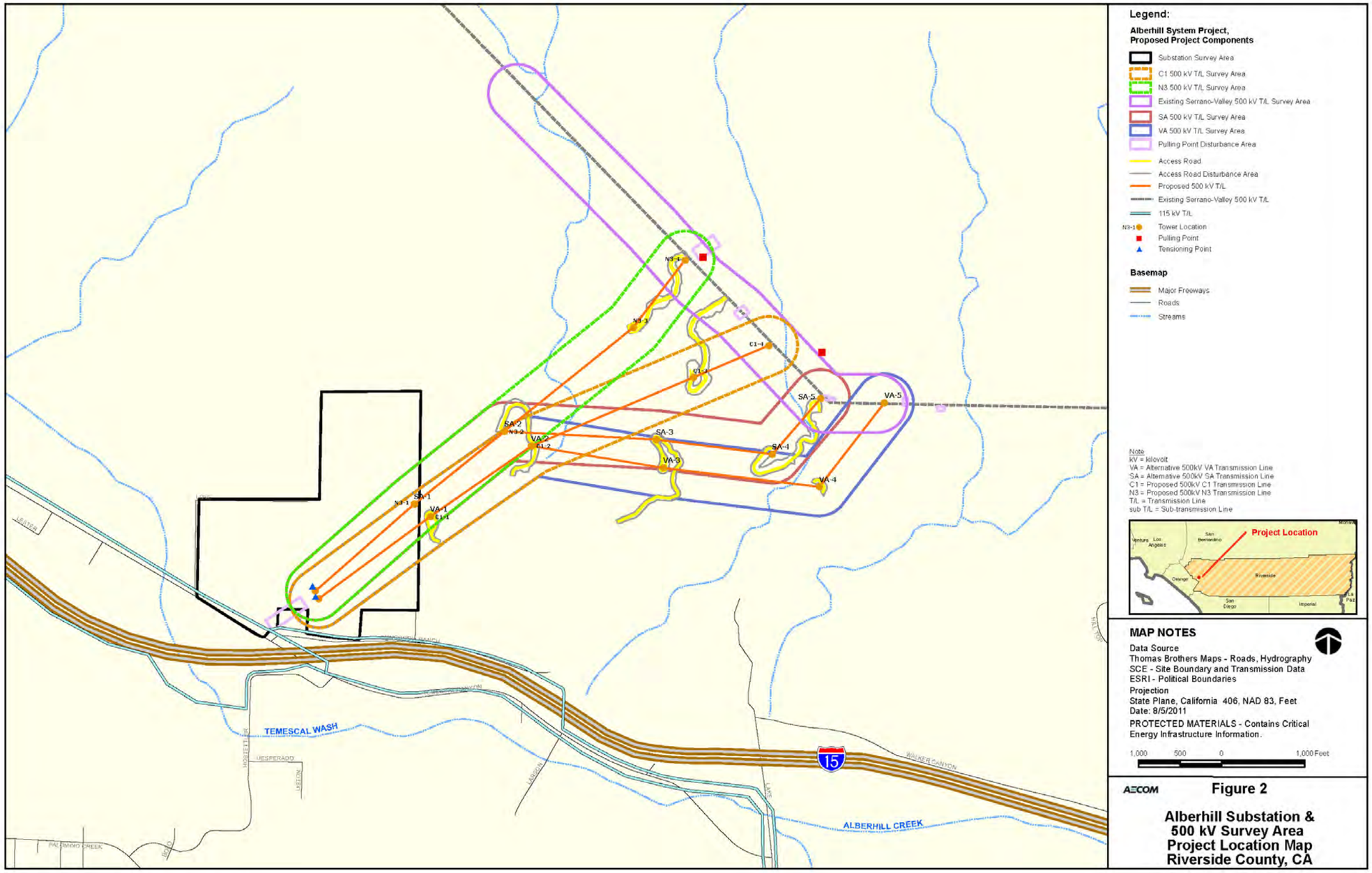


Figure 1

Regional Location



Path: C:\Projects\2011 surveys\Alberhill\ArcGIS\Final\Wetlands\Figure 2.mxd

This project will involve the construction of a substation in the lower (southwesterly) portion of the site, and the erection of a 500-kv transmission line (with alternative alignments) to and from the Substation to connect the Substation with the existing 500-kv transmission line in Serrano Valley to the east/northeast.

The project area encompasses two primary topographic areas: (a) a southerly area that exhibits level to gently sloping lands just northward of I15, and adjacent low hills; and (b) the steeper lands eastward of area (a). The southwestern portion of the project site is primarily level to gently sloping terrain along the Temescal Creek floodplain. This area is heavily developed and contains a now abandoned and largely dismantled horse ranch, corrals, pastures, stables and a training track. Although topography and general soil conditions in this area are superficially suitable for SKR and/or LAPM, development has eliminated the potential for occurrence of both species over most of this lower part of the project area. Some other lands in this southern portion of the project area exhibit steeper topography or exhibit a variety of human disturbances and structures. Nonetheless, these lands still contain scattered patches of level to gently sloping terrain generally suitable for SKR, primarily in some canyon bottoms, on saddles and ridgelines, and on less disturbed shallow slopes. The apparent absence of SKR populations in the immediate vicinity of the Substation project area greatly reduces or eliminates the potential for any future passive colonization of any small patches of suitable habitat that do occur within the study area.

A majority of the remainder of the site, area (b), encompasses the steeply sloping rugged hills to the north, which are dominated by dense stands of disturbed annual grassland and moderate to dense stands of sage scrub that comprise habitat conditions generally unsuitable for either species. However, scattered small parcels of land in this steeper region still exhibit level to gently sloping terrain with open grassland and/or sparse sage scrub habitat that can be considered suitable for either species. In addition, the northerly portion of the study area falls within lands managed by the Riverside County Habitat Conservation Authority (RCHCA) (1995).

Soils on the site vary widely in their suitability for SKR and/or LAPM. Many are generally unsuitable, consisting of coarse rocks and clays in the higher elevations and on slopes. Some of the lower lying areas, saddles and gentle slopes exhibit better-drained friable soils with higher percentages of the loams that are more suitable for SKR. However, the sandy and more friable types of soils preferred by LAPM are quite rare in the overall project area.

Much of the site is covered by sparse to moderately dense non-native grasses and both native and non-native forbs. Common forbs include mustard (*Hirschfeldia incana),* fiddleneck (*Amsinckia menziesii*), filaree (*Erodium botrys*), tarweed (*Hemizonia sp*), distant phacelia (*Phacelia distans*), London rocket (*Sisymbrium irio),* slender sunflower (*Helianthus gracilentus*) and deer weed (*Lotus scoparius).* Common grasses present throughout the site include: wild oats (*Avena sp*.), cheatgrass (*Bromus tectorum*), ripgut (*Bromus diandrus*), and red brome (*Bromus madritensis rubens),* barley *(Hordeum murinum),* golden top *(Lamarkia auria),* and fescue *(Vulpia sp).* Stands of Riversidean sage scrub vegetation also are present at scattered locations across the site. Common constituents of this community include brittlebush (*Encelia farinosa*), white sage (*Salvia apiana*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and at scattered locations tree-shrubs such as Mexican elderberry (*Sambucus mexicana*) and laurel sumac (*Malosma laurina*). Stands of mule-fat (*Baccharis salicifolia*) occur

in certain drainages, and invasive species such as Russian thistle (*Salsola sp.)* and tamarisk (*Tamarix ramosissima)* also occur in scattered localities across the site.

Area 2 – 115kv Line

The **115kv** project area consists of a long (approximately 17 miles) mostly continuous linear power line alignment comprised of (a) a westerly segment located west Interstate 15 and northeast and east of Lake Elsinore, (b) a central segment that crosses in an easterly direction over the local hills and onto more level lands along Bundy Canyon Road, and (c) two easterly segments (one is an alternative) that turn northward from Bundy Canyon Road and terminate just north of Newport Road at the south edge of Sun City (Figure 3). The alignment occurs in parts of the following 7.5' USGS Quadrangle Map Sections:

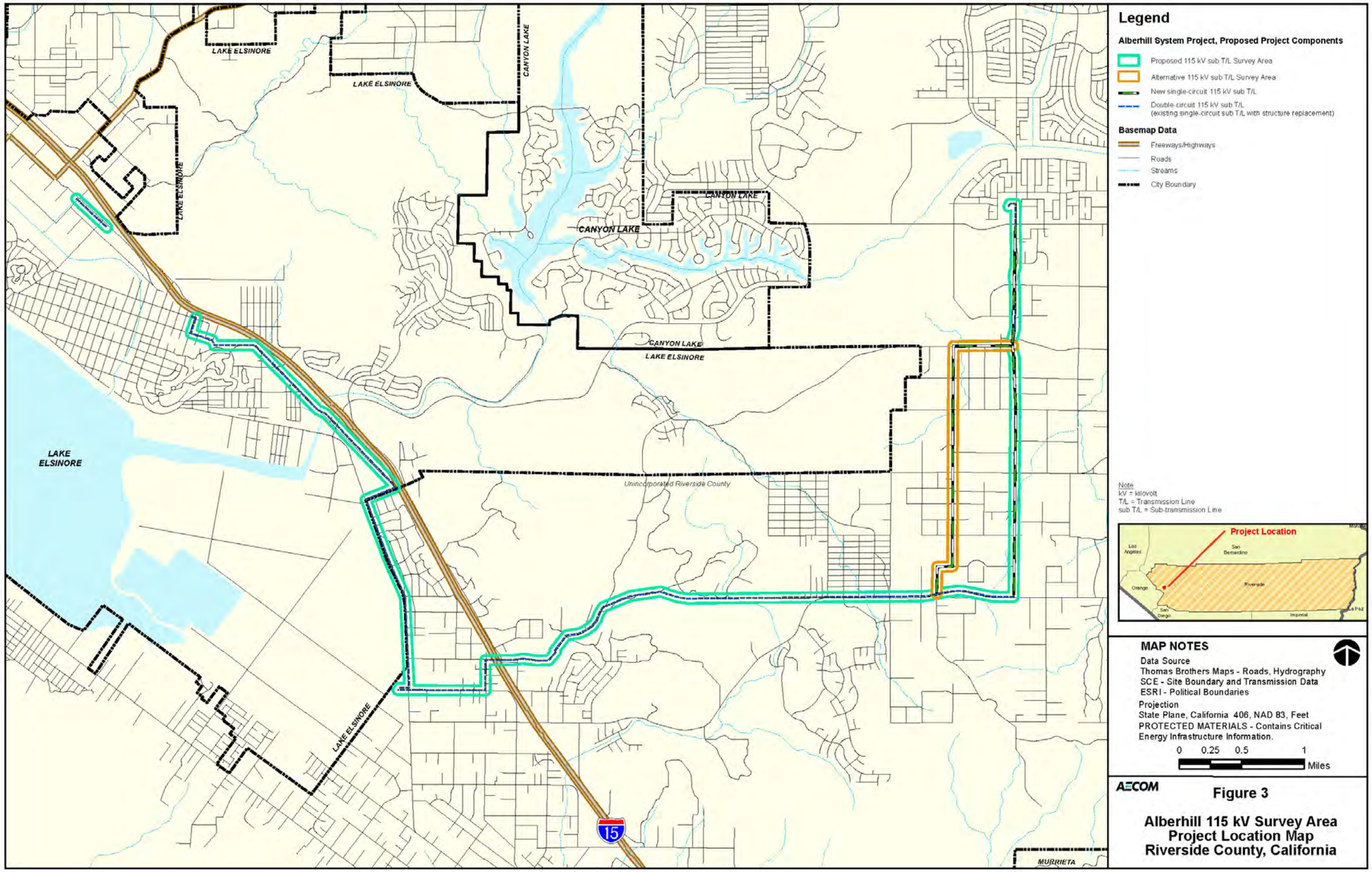
Quad Map	Section	Township	Range
Lake Elsinore and Romoland	31	5S	4W
	6,8,9,13,15,16,22,23	6S	4W
	4,5,8,9,16,17,18	6S	3W
	32,33	5S	3W

The UTM (NAD83) coordinates for the approximate center points of the three segments of this alignment are as follows:

Western – 473313E/3723220N (approximately 1473 feet elev.)
Central – 478073E/3721986N (approximately 1754 feet elev.)
Eastern – 480888E/3725210N (approximately 1499 feet elev.)

This project will involve the construction of a new transmission line, and the modification of an existing 115-kv line, along the proposed (or alternate) alignments.

The current **115kv** project alignment primarily follows existing well developed roads. Thus, existing habitat disturbance is extensive and intense in most parts of the alignment. Different types of development (cultivation, housing, industrial, roadways, graded and disked fields, etc.) occur along all sections of the alignment. Heaviest development occurs in the western and eastern sections, with lower density development occurring in the steep rugged middle sections. Numerous parcels in the western and eastern segments exhibit parcels that have been or appear to have been graded within the past twelve months (1 year). In contrast, remaining parcels of land in the more level sections of the central and eastern segments that exhibit sage scrub exhibit some conditions potentially suitable for one or both species. Topography along the alignment ranges from level to steeply sloping. Soils also vary considerably but are typically loams in most locations; and sandy soils are uncommon in the project area. Vegetation cover in undeveloped lands includes ruderal disturbed grassland, sage scrub, riparian, and on rare occasion chaparral. The San Jacinto River crosses the alignment just west of I-15 near Lake Elsinore. LAPM are known to occur in association with this river to the east of the project area; thus, this drainage was considered as potentially occupied by this pocket mouse.



Legend

Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

Basemap Data

- Freeways/Highways
- Roads
- Streams
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line

MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 0.25 0.5 1 Miles

AECOM

Figure 3

Alberhill 115 kV Survey Area
Project Location Map
Riverside County, California

Lands exhibiting grassland and/or sage scrub habitats that are generally or potentially suitable for SKR and LAPM occur primarily in the eastern segment of the 115kv project area. Lands in the central section are generally entirely unsuitable for both species, due to heavy development or substrate disturbance, or due to steep rugged terrain covered in sage scrub and chaparral vegetation. Lands in the western section are generally very heavily developed and entirely unsuitable for either species, with the possible exception of the lands immediately adjacent to the San Jacinto River outlet just north of Railroad Canyon Road.

Soils in the **115kv** project area vary from loams to sands, depending on the particular location. Vegetation types in the project area include disturbed annual grassland, sage scrub and chaparral vegetation, riparian scrub and ruderal (weedy) vegetation. The diversity of plant species in the overall project area naturally varies considerably due to the length and variety of plant communities and topographic features traversed by the alignment. Plants listed above for the Substation area and many more are found in the 115kv alignment. For the current broad-scope field effort, plant species lists are far less important than fundamental vegetation community types.

PREVIOUS SURVEYS

The results of the previous field surveys in Area 1 and Area 2 are summarized below. Further details of these surveys can be found in the respective study reports, as cited below.

Area 1 – Substation

Previous field surveys for SKR and LAPM in 2009 (Montgomery 2009, 2010a) found SKR in one location in the southern part of the **Substation** project area, and no evidence of LAPM anywhere in the area. However, the lowland areas that were previously occupied by an active horse ranch had been abandoned by 2011. As a result, due to the absence of horse and cattle grazing in 2011, which previously kept herbaceous vegetation cover to a minimum, herb cover was very dense in many areas and the substrate disturbances and compaction created by heavy livestock hooves were absent. These changes led to the potential for SKR and/or LAPM to occupy locations that previously were largely unsuitable, and trapping was considered necessary to re-confirm the status of each species in the project area exhibiting the highest likelihood of yielding either species. The northerly steeper habitats in Area 1 remained relatively unchanged since 2009. To be conservative, those higher elevation sites, where habitat conditions were somewhat suitable for SKR, were re-trapped to confirm absence of SKR.

Area 2 – 115kv

A survey to determine the potential for LAPM in potential habitat areas along the **115kv** project area was conducted in 2010 (Montgomery 2010b). The potential for SKR along this alignment also was reviewed at this time (see Table 1).

Table 1. Summary of final polygons in 115kv project area that were selected for trapping for LAPM and SKR, and trap results.

Polygon Number	Map Pages	SJM Initial Reconnaissance Species Potential*	SJM Initial Reconnaissance - Sign Observed?	Trapped by**	Trapped?	SKR Present?	LAPM Present?
11C	10	lapm	?? none obvious	dg	yes	No	No
12B	10	lapm	?? none obvious	dg	yes	No	No
25	29, 30	skr	krat scat - minimal	dg	yes	No	No
28	32	lapm	?? none obvious	dg	no	No	No
32	34	skr, lapm	?? none obvious	dg	yes	No	No
31	34	skr, lapm	?? none obvious	dg	yes	No	No
39	39, 40	skr	?? none obvious	dg	yes	No	No
55	52	lapm	?? none obvious	dg	yes	No	No
65	63, 64, 65	skr very likely, lapm	scat, burrows	dg	yes	Yes	No
64	64, 65	skr, lapm	?? none obvious	pb	yes	Yes	No
69	61	skr, lapm	scat (scant)	pb	yes	Yes	No
67	62	skr	scat (scant)	pb	yes	No	No
45	42, 43	lapm	?? none obvious	pb	yes	No	No
70	59, 60	skr, lapm, west edge	krat scat, burrows	pb	yes	No	No
73	35,36	skr & lapm	krat scat	pb	yes	No	No
35	37	lapm	?? none obvious	dm	yes	No	No
36	37	lapm	?? none obvious	dm	yes	No	No
37	37	lapm	?? none obvious	dm	yes	No	No
41	39, 40, 41	lapm	?? none obvious	dm	yes	No	No
42	41	lapm - south edge	?? none obvious	dm	yes	No	No
43	41	lapm	?? none obvious	dm	yes	No	No
48	45, 46, 47, 48	lapm	?? none obvious	dm	yes	No	No
71	59	skr & lapm	fenced - no access	no access	no access	?	?
34	35, 36	skr & lapm	fenced - no access	no access	no access	?	?
56	53, 54	skr & lapm	fenced - no access	no access	no access	?	?
68	61, 62	skr & lapm	fenced - no access	no access	no access	?	?

* Species Names - lapm = Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), skr = Stephens' kangaroo rat (*Dipodomys stephensi*)
**Trapper
dg = Dan Grout
dm = Dana McLaughlin
pb = Phil Brylski

This previous survey identified and mapped any parcels along the alignment exhibiting even a slight potential for LAPM as needing to be trapped to confirm absence of this species. This was a relatively superficial field assessment based on rudimentary habitat conditions on many parcels of land, a number of which could not be accessed or viewed at close range due to fencing. Thus, the potential habitat designation assigned to many of these parcels at that time was very tentative and intended for refinement during the subsequent intensive field effort that would include trapping. Maps showing all potentially occupied parcels of land (hereafter called "**polygons"**) were then prepared for subsequent field re-assessment and trapping studies. Each polygon was assigned a successive number (beginning in the western segment and continuing through the eastern segment) in order to keep track of field data by specific location (Figures 11-17 – Appendix B).

Numerous polygons were mapped in the three sections of the alignment at that time (see Figures 11-17 – Appendix B). Nonetheless, nearly all of the parcels exhibiting habitat conditions with the greatest potential for either LAPM or SKR occurred in the eastern portion of the central segment and along the eastern segment (including the alternative alignment). These easterly segments exhibited a number of parcels of varying size with grassland, sage scrub and chaparral habitat in various states of degradation; and a few of these parcels appeared to harbor SKR. None of the western segment exhibited parcels of habitat with a reasonable potential of harboring either of the target species. However, the disturbed habitat at the intersection of the alignment and the San Jacinto River was considered worthy of inclusion in the trapping survey, since LAPM are known to associate with this drainage to the east.

Conditions in the **115kv** project area remained largely unchanged between the time of the original LAPM habitat assessment (Montgomery 2010b) and the current trapping field effort. Areas previously identified as exhibiting some potential for LAPM or SKR (Figure11- Appendix B) still required closer field evaluation and/or trapping to confirm the presence/absence of these species.

Stephens' kangaroo rat status, natural history and distribution

The Stephens' kangaroo rat was listed as Endangered by the U.S. Fish and Wildlife Service in 1988, and as Threatened by the California Department of Fish and Game in 1971 (USFWS 1997). This species is covered by the existing Riverside County Stephens' Kangaroo Rat Habitat Conservation Plan (RCHCA 1995), which was one of the first plans of this type to be developed in the United States.

This kangaroo rat is known to occur widely in Riverside County, in a few localities in southwestern San Bernardino County, and at several localities in San Diego County (Lackey 1967; Montgomery 1991; Montgomery et al. 1996/1997; O'Farrell and Uptain 1989; O'Farrell et al. 1986; O'Farrell 1987; Ogden 1998; SJM Biological Consultants 2003; Thomas 1975, 1973; USFWS 1997). Stephens' kangaroo rats are known to occur in the vicinity of the project site (see below), which necessitated a determination of SKR presence/absence on the property.

California Department of Fish and Game 2011 CNDDB records show various SKR capture locations in the region of the **Substation** and **115kv** project areas, and in some cases relatively close to one or the other project site. Although most of these records are old and represent observations of sites that are now developed or otherwise non-habitat for SKR, they reveal that the species occurs throughout the area and may, therefore, occur in any remaining locations that exhibit relatively undisturbed patches of grassland and sparse sage scrub habitat.

General natural history features and habitat requirements of SKR are fairly well known (O'Farrell 1987, 1990). Habitats occupied by SKR characteristically occur on level to gently sloping terrain, although the species has occasionally been found on relatively steep slopes (e.g., Montgomery 1990; M.J. O'Farrell, pers. comm.). Soils in habitats harboring SKR are typically loamy in nature, while soils dominated by clay or sand very rarely contain this species (Price and Endo 1989; S.J. Montgomery, pers. observ.; M.J. O'Farrell 1987; O'Farrell and Uptain 1989).
Stephens' kangaroo rats typically occupy lands described as disturbed annual grassland and characterized by a relatively sparse cover of both shrubs and herbaceous vegetation. Although resident SKR have occasionally been found in relatively dense stands of sage scrub in Riverside County (S.J. Montgomery, pers. observ.), such occurrences are by far the exception to the rule. Occupied habitats commonly exhibit an abundance of bare soil during much of the year. Nonetheless, spring/early-summer flushes of forb (e.g., *Erodium sp.*) growth often temporarily reduce the amount of visible exposed ground. This phase of the yearly cycle of vegetation growth is subsequently transformed by the desiccating forces of the summer season, which cause non-grass herbaceous vegetation (i.e., forbs) to dry up and disarticulate, again revealing the bare ground that is so characteristic of occupied SKR habitat. Reflecting this preference for open ground, a high ratio of forbs to grasses increases the suitability of any grassland for SKR.

Stephens' kangaroo rats are capable of occupying small patches of favorable habitat amidst otherwise unsuitable (e.g., dense grassy) habitats. They also readily use narrow strips of open habitat to move between larger blocks of suitable habitat (S. Montgomery, pers. observ; O'Farrell 1990; Price and Kelly 1992).

Los Angeles pocket mouse status, natural history and distribution

The LAPM is a California Department of Fish and Game Species of Special Concern (CSC), but is not listed as endangered or threatened by the CDFG or U.S. Fish and Wildlife Service. Based on the information provided with their list of "Special Animals," the Department of Fish and Game has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction (CDFG 2009). The goal of this designation is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their continued existence.

The LAPM is a covered species in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and is on the MSHCP *Additional Survey Needs and Procedures* list. Surveys for the LAPM are required to be conducted as part of the project review process for projects occurring within the MSHCP designated Mammal Species Survey Area where suitable

habitat is present (Dudek and Associates 2003). Although the current **Substation** and **115kv** project areas occur outside the designated MSHCP Mammal Species Survey Area, the results of the Biological Resources Technical Report (BTR) produced for the Proposed Alberhill System Project concluded that LAPM had a moderate potential to occur within the project alignment (AECOM, 2009). LAPM potential for occurrence within the BTR is based on the species' preferred habitat and the vegetation communities mapped within the project alignment area. This pocket mouse is a high priority species for the MSHCP, and developers of project sites found to harbor this animal must provide mitigation lands to offset disturbances to occupied habitats.

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). Examples of noteworthy LAPM populations that have been confirmed in recent years include the following: (a) Lake Perris State Recreation Area (e.g., Montgomery 2003); (b) the outflow point of Massacre Canyon, along the northern edge of the San Jacinto River floodplain (Montgomery 1994a); (c) farther east in the San Jacinto River floodplain at the Gilman Springs Bridge and beyond (Montgomery 2002; Montgomery 2010b); (d) to the south in the area of Skunk Hollow east of Murrieta Hot Springs (Montgomery 1994b); (e) Double Butte County Park to the east of Sun City (Montgomery and Davenport 2005); (f) Aguanga and Vail Lake areas (Dudek and Associates 2003); (g) San Gorgonio Wash area and San Timoteo Canyon (Dudek and Associates 2003; CNDDB records); (h) Santa Ana River Wash near Redlands (Montgomery 2009); and (i) in Fontana along an existing SCE power line (Montgomery 2010a). Populations are known from a number of other locations in the 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.

Based on a review of the California Natural Diversity Data Base (CNDDB) (CDFG 2011), no previous records were reported for the current project alignments. LAPM occurrences closest to the current project area occur in the vicinity of Murrieta and Double Butte, 7.4 miles to the south and 5.5 miles to the east, respectively.

The preferred habitat of 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; Montgomery 1994a, b, and 2002). Nonetheless, LAPM also have been captured a considerable distance from distinctly sandy soil habitats, such as at the San Jacinto Wildlife Area and at March Air Force Base (Montgomery pers. observ.). The primary vegetation communities in which LAPM have been found include disturbed (non-native) annual grassland, Riversidean sage scrub, and Riversidean alluvial fan sage scrub; however, chamise and red shank chaparral associations also are used by this pocket mouse. Volume II-B of the Riverside County MSHCP contains a thorough treatment of habitat requirements and related information for the LAPM (Dudek and Associates 2003).

METHODS

Area 1 - Substation

This project area was re-assessed for conditions potentially or definitely suitable for SKR and/or LAPM. The southerly lowland areas that were no longer occupied by the horse ranch were re-checked for their potential to harbor the two target species, due to the changed habitat conditions in these areas. Areas exhibiting conditions that appeared to be at least potentially suitable for SKR or LAPM were then trapped to confirm species absence. Trap lines were set out in those locations with conditions most suitable for, and therefore the most likely to yield, either species. Traps were set and baited with bird seed during the late afternoon, checked near midnight, and then checked again and closed each following morning. All trapping in the Substation project area was conducted by Daniel J. Grout, a sub-permittee to Stephen J. Montgomery, who holds a USFWS Permit (TE745541-10) and a CDFG MOU authorizing trapping and handling of SKR and LAPM.

A total of 925 12-inch collapsible Sherman live traps was set out at 8 locations during 5 nights on 14-15 and 29-31 July 2011 (Figures 5-10 - Appendix A). Not all of the previously trapped (2009) locations in potential habitats were re-trapped during the current field effort. Such locations had been trapped in 2009 as a cautionary procedure, to confirm that these low-potential sites were indeed not occupied by SKR. The more isolated habitat areas in more rugged locations in the project - particularly those that yielded the non-endangered Dulzura kangaroo rat (D. simulans) (DKR) during the previous trapping survey in 2009 - were considered to be unoccupied by SKR and not re-trapped

Area 2 – 115kv

This project area was re-assessed for conditions potentially or definitely suitable for SKR and/or LAPM by Stephen J. Montgomery on 16-17 July 2011. All segments of the alignment with polygons marked in 2010 as potentially suitable habitat for LAPM and/or SKR (Figures 11-17 – Appendix B) were revisited at this time, for a final review and habitat assessment prior to initiating trapping surveys.

A number of polygons identified in the original preliminary (2010) habitat assessment (Montgomery 2010b) were eliminated from further consideration at this time, for one or more of the following reasons:

- Excessive substrate and/or habitat disturbance
- Lack of any sign of SKR and/or LAPM
- Occurs behind fences on private property. No fenced properties would be disturbed by any actions associated with the proposed transmission line system unless permission to gain access to these lands was legally obtained. Field assessments for sensitive small mammals would then be conducted on such properties at that time.
- The size of a parcel with potentially suitable habitat was very small and isolated from other habitat patches by uninhabitable ground

Polygons remaining after this reevaluation were included in the trapping survey (see Table 1). Within the selected polygons, trap lines were set out in locations exhibiting the highest quality habitat conditions for, and therefore the highest likelihood of capturing, SKR and/or LAPM (see Figures 18-31 – Appendix C). Thus, most polygons contained multiple trap lines. Traps were set and baited with commercial bird seed during the late afternoon, checked near midnight, and then checked again and closed each following morning.

Trapping in the **115kv** project area was directed by Stephen J. Montgomery. Daniel J. Grout (DG), Dana McLaughlin (DM) (CDFG MOU for LAPM), and Dr. Phil Brylski (PB) (USFWS Permit TE148555-0, CDFG MOU for SKR and LAPM) conducted all field trapping surveys for this project. D. McLaughlin only conducted trapping in polygons with no potential for SKR. Trapping within the 115kv project area by these field investigators occurred on the following dates in 2011: 28 July – 2 August (DM), 31 July - 5 August (PB), 1 - 6 August (DG). A total of 2,794 12-inch collapsible Sherman live traps was set out at 21 polygons during 15 man-nights on these dates. Locations of trap lines in the various polygons are shown in Figures 18-31 (Appendix C).

RESULTS

Typical weather conditions during the field surveys in both project areas included clear skies, warm to hot air temperatures (90-100 F) and wind speeds of 10-25 mph. Rain fell during the daylight hours on one or two survey days during the **115kv** trapping effort, but not during the night when traps were set. Thus captured animals were never in any danger of excessive exposure to low temperatures or wet conditions.

Area 1 – Substation

Stephens' kangaroo rats were captured in the same southern location in the Substation area that yielded this species in 2009 (Trap Line 3). This species also was captured at two new localities: one in the immediate vicinity of the first site (Trap Line 4), and one a considerable distance to the west of the first location (Trap Line 8) (Table 2; Figures 6-10 – Appendix B). The total acres occupied by SKR, as defined by the trapping surveys in 2009 and 2011, as well as by habitat evaluations in the immediate vicinity of the SKR capture sites, are summarized below and shown in Figures 6 and 7 (Appendix B).

Trap Line Area	Occupied Acres
3 + 4	2.0
8	0.8

Also captured at the various polygons were the non-endangered Dulzura kangaroo rat, San Diego pocket mouse and deer mouse. No LAPM were captured in any part of the project area. A total of 204 captures was recorded among the four trapped species during the 5-night trapping effort, with the ubiquitous deer mouse being the most commonly captured species. Although the San Diego pocket mouse is a CDFG sensitive species (CSC, species of concern), it occurs widely in sage scrub and grassland habitats in the Riverside County and is not considered to be in any danger of extinction. Thus, the San Diego pocket mouse does not require mitigation actions.

Table 2. Trap Results for the Substation Project Area - July 2011							
Area	**# Traps**	**Date Traps Set (2011)**	**Animals Captured***				**TOTALS**
			SKR	**DKR**	**CHFA**	**PEMA**	
1	25	14-Jul		1		8	9
	25	15-Jul				6	6
	25	29-Jul		1	1	5	7
	25	30-Jul				4	4
	25	31-Jul				5	5
2	25	14-Jul		1	2	4	7
	25	15-Jul			1	2	3
	25	29-Jul		1		5	6
	25	30-Jul		1		3	4
	25	31-Jul			1	2	3
3	25	14-Jul	1AF	2		3	6
	25	15-Jul	1AM	2	1	4	8
	25	29-Jul		1	2	2	5
	25	30-Jul	1AM	2		3	5
	25	31-Jul		1	2	2	6
4	20	14-Jul	1AF			2	3
	20	15-Jul				1	1
	20	29-Jul	1AF			1	2
	20	30-Jul			1		1
	20	31-Jul	1AF			1	2
5	25	14-Jul		1	3	3	7
	25	15-Jul			4		4
	25	29-Jul		2	3	2	7
	25	30-Jul		1	1	4	6
	25	31-Jul		3	2	4	9
6	25	14-Jul		1	6	5	12
	25	15-Jul		2	5	3	10
	25	29-Jul			3	5	8
	25	30-Jul		1	4	2	7
	25	31-Jul		2		3	5
7	15	14-Jul			1	1	2
	15	15-Jul		1		3	4
	15	29-Jul			2	1	3
	15	30-Jul			1	2	3
	15	31-Jul		1	1		2
8	25	14-Jul	2 - 1AM, 1AF	1		1	3
	25	15-Jul	1AM		1	3	5
	25	29-Jul		2		2	4
	25	30-Jul	1AF	1	1	1	4
	25	31-Jul	2 - 1AM, 1AF	1		2	5
Totals	**925**	**5 NIGHTS**	**12**	**33**	**49**	**110**	**204**

Animals Captured*

SKR Stephens' kangaroo rat (*Dipodomys stephensi*)
DKR Dulzura kangaroo rat (*Dipodomys simulans*)
CHFA San Diego pocket mouse (Chaetodipius fallax fallax)
PEMA Deer mouse (*Peromyscus maniculatus*)

All trapping conducted by Daniel J. Grout

Area 2 – 115kv

The trapping survey confirmed that SKR are present in Polygons 64, 65 and 69, all of these falling with the Alternate Alignment in the eastern segment of the **115kv** project area. (Tables 1 and 3). The locations and number of acres of occupied SKR habitat in these polygons are summarized below and shown in Figures 29 and 31 – Appendix C). In particular, Polygon 65 harbors a noteworthy population of this species across a sizable area (4.7 acres) of open scrub/grassland habitat. Polygon 64 appears to be occupied at scant levels, probably representing a rare individual that occasionally migrates eastward across the road from the adjacent Polygon 65 into the sub-optimal habitat of 64, whereas Polygon 69 harbors low numbers of SKR in a very limited area of open habitat. UTM coordinates (NAD83) for the SKR capture points at all three locations are presented in Table 4.

Polygon No.	Occupied Acres
64	0.5
65	4.7
69	0.3

Also captured across the 21 different polygon trap lines were the non-endangered Dulzura kangaroo rat, San Diego pocket mouse, California meadow vole, non-native house mouse, Bryant's (San Diego) woodrat, big-eared woodrat, deer mouse, non-native black rat, western harvest mouse, California ground squirrel and Botta's pocket gopher (Table 3). No LAPM were captured in any part of the project area. A total of 418 captures of the 12 captured species was trapped across the various polygons and trap lines. The San Diego pocket mouse and deer mouse were the most commonly captured species on most trap lines.

A review of the trap results in Table 3 reveals the following three distinct patterns: (a) the deer mouse, a common indicator of degraded natural vegetation communities, was the most commonly captured species in many polygons; (b) the non-native house mouse and black rat, as well as the California ground squirrel, all indicators of disturbed habitat areas near human habitation, were captured at several polygons; and (c) percent trap success (number of captures/total traps set) varied considerably across the various trap lines/polygons. The predominance of the three disturbance-associated species in the trapped polygons indicates that many habitats exhibited considerable degradation from various human impacts. This fact suggests that the rare LAPM would be relatively unlikely in the project alignment. In contrast, since the SKR habitats with minimal ground cover, some disturbance in otherwise densely vegetated habitat stands can actually encourage the presence of this endangered species. This increased the potential for SKR in some polygons with remaining stands of native scrub vegetation. The variation in trap success among polygons reflects the varying quality of habitats encompassed by the trapping surveys. Those with low trap success are typically those located in lower quality habitats, while those with higher trap success are those in less disturbed more natural habitats.

Table 3. Results of live-trapping for Stephens' kangaroo rats at the Substation project area - July and August 2011.

Polygon Trapped	Total Number of Traps Set	Trapper** Date Trapped	Animals Captured*												Total Per Polygon
			SKR	DKR	CHFA	MICA	MUMU	NEBR	NEMA	PEMA	RARA	REME	SPBE	THBO	
11	125	DG 8/1 - 8/6/2011	0	0	5	0	0	4	0	29	0	0	0	0	**38**
12	125	DG 8/1 - 8/6/2011	0	0	6	0	0	0	0	5	0	0	0	0	**11**
25	125	DG 8/1 - 8/6/2011	0	3	7	0	0	0	0	6	0	0	0	0	**16**
31	125	DG 8/1 - 8/6/2011	0	0	34	0	0	0	0	0	0	4	0	0	**38**
32	125	DG 8/1 - 8/6/2011	0	0	4	0	0	0	0	6	0	5	0	0	**15**
39	150	DG 8/1 - 8/6/2011	0	0	3	0	0	0	0	8	0	0	0	0	**11**
55	100	DG 8/1 - 8/6/2011	0	5	6	0	0	0	0	15	0	0	0	0	**26**
65	120	DG 8/1 - 8/6/2011	36	18	15	0	0	3	0	3	0	0	0	0	**75**
Total Traps Set/Captures Per Species	**870**		**36**	**26**	**75**	**0**	**0**	**3**	**0**	**43**	**0**	**9**	**0**	**0**	**192**
35	150	DM 7/29 - 8/2/2011	0	0	5	5	3	0	5	5	0	2	0	0	**25**
36	80	DM 7/29 - 8/2/2011	0	0	4	0	0	0	0	4	0	0	0	0	**8**
37	50	DM 7/29 - 8/2/2011	0	0	5	0	0	0	2	4	0	0	0	0	**11**
41	154	DM 7/29 - 8/2/2011	0	0	5	0	2	0	5	5	0	0	1	0	**18**
42	50	DM 7/29 - 8/2/2011	0	0	4	0	0	0	0	5	3	0	0	1	**13**
43	65	DM 7/29 - 8/2/2011	0	0	3	4	1	0	0	5	0	0	1	0	**14**
48	425	DM 7/29 - 8/2/2011	0	0	5	2	5	0	0	5	0	1	5	0	**23**
Total Traps Set/Captures Per Species	**974**		**0**	**0**	**31**	**11**	**11**	**0**	**12**	**33**	**3**	**3**	**7**	**1**	**112**
45	150	PB 8/1 - 8/5/2011	0	0	16	0	0	0	0	12	0	0	0	0	**12**
64	150	PB 8/1 - 8/5/2011	1	8	17	0	0	0	0	16	0	0	0	0	**16**
67	150	PB 8/1 - 8/5/2011	0	16	11	0	0	1	0	12	0	0	0	0	**13**
69	150	PB 8/1 - 8/5/2011	3	13	6	0	1	0	0	19	0	0	0	0	**19**
70	75	PB 8/1 - 8/5/2011	0	5	3	0	0	0	0	6	0	0	0	0	**6**
73	150	PB 8/1 - 8/5/2011	0	1	11	0	0	0	0	10	0	0	0	0	**10**
Total Traps Set/Captures Per Species	**825**		**4**	**43**	**64**	**0**	**1**	**1**	**0**	**75**	**0**	**0**	**0**	**0**	**76**

*** Animals Captured -**

SKR = Stephen's kangaroo rat (*Dipodomys stephensi*), DKR = Dulzura kangaroo rat (*Dipodomys simulans*), CHFA = San Diego pocket mouse (*Chaetodipus fallax fallax*), MICA = California vole (*Microtus californicus*), MUMU = House mouse (*Mus musculus*), NEBR = Bryant's woodrat (*Neotoma bryanti*), NEMA = Big-eared woodrat (*Neotoma macrotis*), PEMA = Deer mouse (*Peromyscus maniculatus*), RARA = Black rat (*Rattus rattus*), REME = Western harvest mouse (*Reithrodontomys megalotis*), SPBE = California ground squirrel (*Spermophilus beecheyi*), and THBO = Botta's pocket gopher (*Thomomys bottae*)

** Trapper -

DG = Dan Grout, DM = Dana McLaughlin, PB = Phil Brylski

Table 4. UTM (NAD83) coordinates for SKR capture locations at three polygons in the 115kv project area, July-August 2011			
SKR Capture Area	**Map Pg.#**	**UTM Coordinate (NAD83)**	
Polygon 69	61	480125	3723832
		480154	3723854
Polygon 64	65	480126	3724781
Polygon 65	63-65	480056	3724463
		480056	3724476
		480062	3724484
		480062	3724530
		480057	3724532
		480038	3724556
		480033	3724583
		480037	3724613
		480047	3724615
		480074	3724637
		480072	3724644
		480070	3724664
		480071	3724682
		480069	3724701
		480064	3724734
		480040	3724710

DISCUSSION

Area 1 – Substation

The field surveys confirmed that SKR still occupy a very limited area of the southern portion of the **Substation** Project Site (Figures 6 and 7 – Appendix A). The capture of SKR at Trap Line 8, where they were not captured during the 2009 trapping effort, apparently indicates that the species was very uncommon at this location in the prior survey period. In fact, the general vicinity of Trap Line 8 exhibited only limited sign of kangaroo rats in 2009, and DKR were captured in this area in the first survey. In contrast, abundant kangaroo rat sign was present in the area of Trap Line 8 in 2011. It is feasible that SKR colonized the area of Trap Line 8 from the location occupied in 2009 – Trap Lines 3 and 4 between the current and previous field survey. The distance (approximately ¼ mile), steepness and habitat conditions separating these areas, as well as the lack of 2011 captures in the intervening area (i.e., in the more level open field containing Trap Line 2) suggest that this scenario is rather unlikely. It also is possible that SKR were present at extremely low numbers in the area of Trap Line 8, but simply were not captured during the field survey in 2009. Nonetheless, the current trapping survey stands as the current indicator of SKR presence/absence on the property. As stated previously, habitats suitable for SKR are rare on the property, and Trap Line Areas 3, 4 and 8 are those considered most likely to yield this species.

Trapping results indicate further that parts of the **Substation** project area outside of the areas of Trap Lines 3, 4, and 8 are presently unoccupied by SKR; therefore, any project features or activities conducted in these areas (outside of the mapped occupied SKR habitat, Figures 6 and 7 – Appendix A), will have no impact on this endangered species at the present time. However, SKR reports are formally only good for one year from the time of this field study. Thus, if construction does not occur in the near future, SKR may expand their current occupied areas into adjacent or nearby parcels of land where suitable conditions persist, thereby possibly resulting in the potential for impacts to this species by project activities in the future.

It is recommended that any project related activities proposed for locations confirmed as occupied by SKR be relocated so as to avoid incidental take of this species. However, since populations of this species are very limited in number and distribution, such project relocations should be rare and minor in scope.

Due to the potential for substrate disturbances in the area of project activities and construction features, it is recommended that any identified SKR habitat be avoided by vehicles (including driving and parking) and structures by a distance of approximately 50 feet. Such areas to be avoided should be clearly marked in the field by a qualified SKR biologist. Such marked areas should be maintained throughout the project construction period, and all project personnel should be educated in formal meetings to the requirements and methods of SKR habitat avoidance throughout the project period. Prior to the commencement of construction related activities each morning, a biologist should check for SKR around parked vehicles in the area around occupied habitat, and any observed SKR should be moved away from such vehicles. It is preferable that any trenches or holes be closed before nightfall so that kangaroo rats will not potentially fall into such openings. If any open trenches or other steep walled excavations are present overnight in the vicinity of occupied SKR habitat, such low areas should be checked for SKR and any SKR

should be removed and released into nearby suitable habitat areas with extant burrows usable by this species.

If avoidance of mapped SKR habitat is not feasible during the project, the following actions may be approved by the RCHCA and state and federal regulatory organizations. An appropriate exclusion fence can be constructed around occupied habitat, after which resident SKR may be trapped and relocated to nearby habitat areas that are deemed suitable for this species and not proposed for any type of project related disturbances. If this approach is followed, the relocation area should be surrounded by appropriate fencing prior to the relocation effort, and artificial burrows should be installed inside the fenced relocation area by a biologist familiar with this method of habitat improvement, thereby providing an immediate source of shelter for relocated animals.

Prior to any SKR habitat disturbance, full details of the fencing and methods of SKR removal/relocation would be provided by a permitted SKR biologist fully familiar with such proposed avoidance/minimization actions and need to be approved by the appropriate Regulatory Agencies.

Area 2 – 115kv

The 2011 trapping surveys confirmed that SKR occupy a limited portion of the Alternate Alignment in the eastern segment of the **115kv** project area; specifically, polygons 64, 65 and 69. This general section of the project area exhibits some noteworthy patches of less disturbed sage scrub habitat that have thus far maintained their suitability for SKR; and such patches are where SKR were captured. Trap results indicate further that other sections of the eastern segment, as well as all of the central and western segments, lack SKR at the present time. Therefore, any project features or activities conducted in these areas (outside of the mapped occupied SKR habitat shown in Figures 29 and 31 – Appendix C) will have no impact on this endangered species at the present time. Similarly, trapping surveys indicate that the LAPM will not be affected by the proposed project, since no individuals of this species were captured at any of the polygons.

SKR reports are formally only good for one year from the time of this field study. Thus, if construction does not occur in the near future, SKR may expand their current occupied areas into adjacent or nearby parcels of land where suitable conditions persist, thereby possibly resulting in the potential for impacts to this species by project activities in the future.

It is recommended that any project related activities proposed for locations confirmed as occupied by SKR be relocated so as to avoid incidental take of this species. However, since populations of this species are very limited in number and distribution, such project relocations are expected to be limited and minor in scope.

Due to the potential for substrate disturbances in the area of project activities and construction features, it is recommended that any identified SKR habitat be avoided by vehicles (including driving and parking) and structures by a distance of approximately 50 feet. Such areas to be avoided should be clearly marked in the field by a qualified SKR biologist. Such marked areas

should be maintained throughout the project construction period, and all project personnel should be educated in formal meetings to the requirements and methods of SKR habitat avoidance throughout the project period. Prior to the commencement of construction related activities each morning, a biologist should check for SKR around parked vehicles in the area around occupied habitat, and any observed SKR should be moved away from such vehicles. It is preferable that any trenches or holes be closed before nightfall so that kangaroo rats will not potentially fall into such openings. If any open trenches or other steep walled excavations are present overnight in the vicinity of occupied SKR habitat, such low areas should be checked for SKR and any SKR should be removed and released into nearby suitable habitat areas with extant burrows usable by this species.

If avoidance of mapped SKR habitat is not feasible during the project, the following actions may be approved by the RCHCA and state and federal regulatory organizations. An appropriate exclusion fence can be constructed around occupied habitat, after which resident SKR may be trapped and relocated to nearby habitat areas that are deemed suitable for this species and not proposed for any type of project related disturbances. If this approach is followed, the relocation area should be surrounded by appropriate fencing prior to the relocation effort, and artificial burrows should be installed inside the fenced relocation area by a biologist familiar with this method of habitat improvement, thereby providing an immediate source of shelter for relocated animals.

Prior to any SKR habitat disturbance, full details of the fencing and methods of SKR removal/relocation would be provided by a permitted SKR biologist fully familiar with such proposed avoidance/minimization actions and need to be approved by the appropriate Regulatory Agencies.

Although LAPM may possibly be present somewhere within this project area, the negative results of the protocol trapping survey indicate that they are absent. The heavy disturbance in all parts of the more level sections of the different segments support this assessment. Thus, no impacts to LAPM are expected to occur during the proposed project.

Please contact me if you have any questions regarding this report or the associated field effort.

Sincerely,



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APPENDIX A

Figures 4-10 of the Substation project area trap lines and occupied SKR habitat

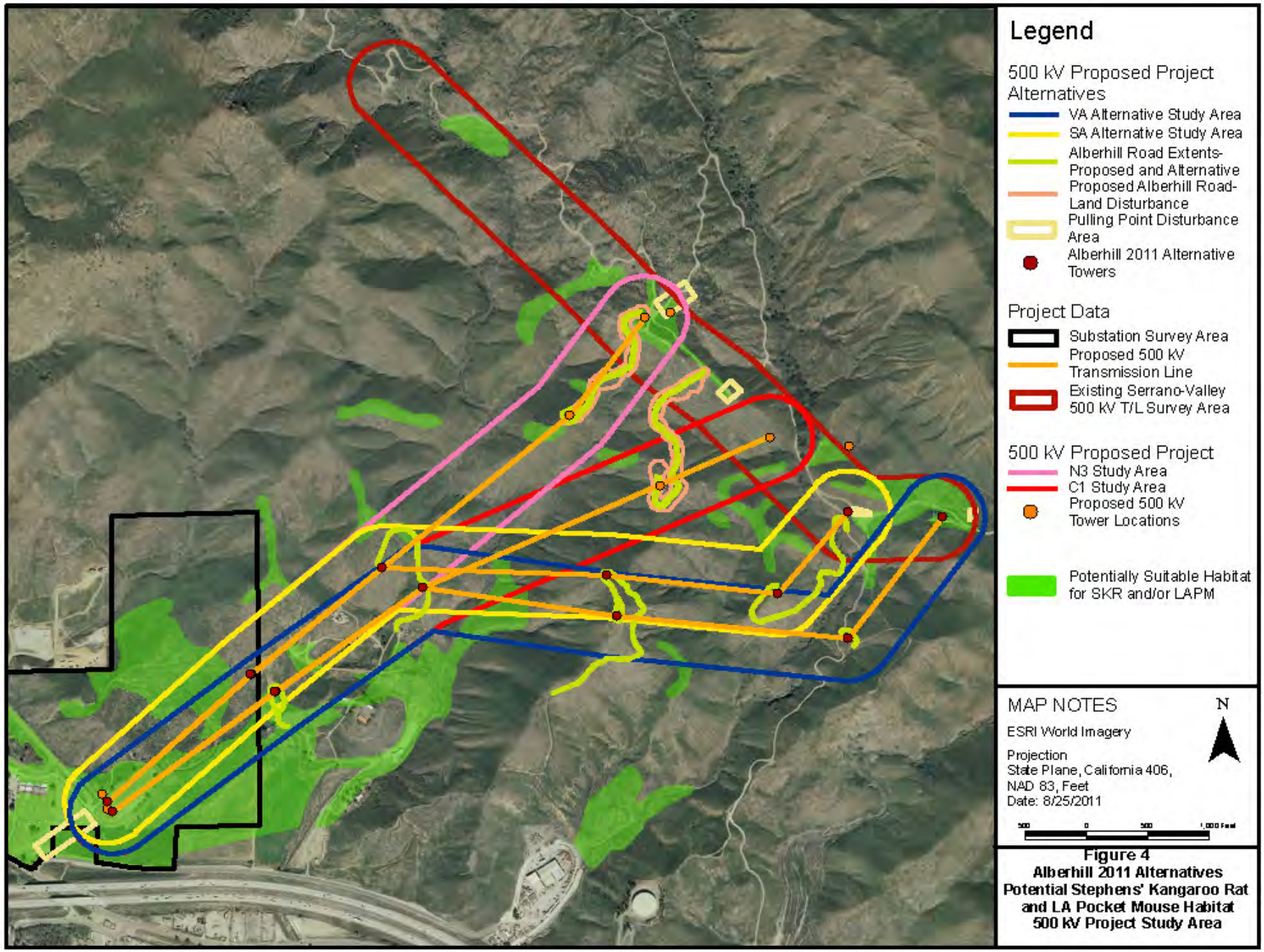


Figure 4
Alberhill 2011 Alternatives
Potential Stephens' Kangaroo Rat and LA Pocket Mouse Habitat
500 kV Project Study Area

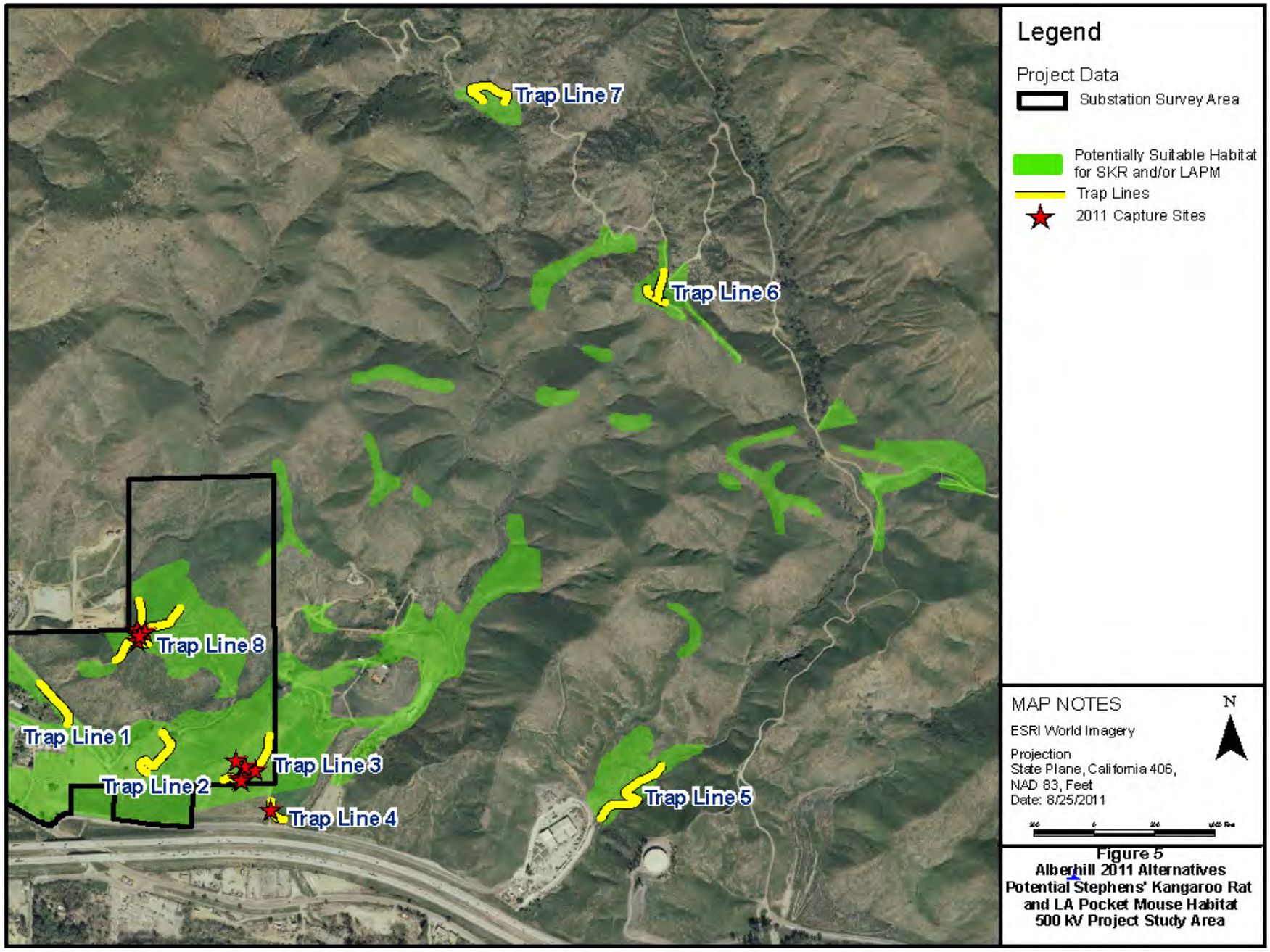


Figure 5
Alberhill 2011 Alternatives
Potential Stephens' Kangaroo Rat and LA Pocket Mouse Habitat
500 kV Project Study Area

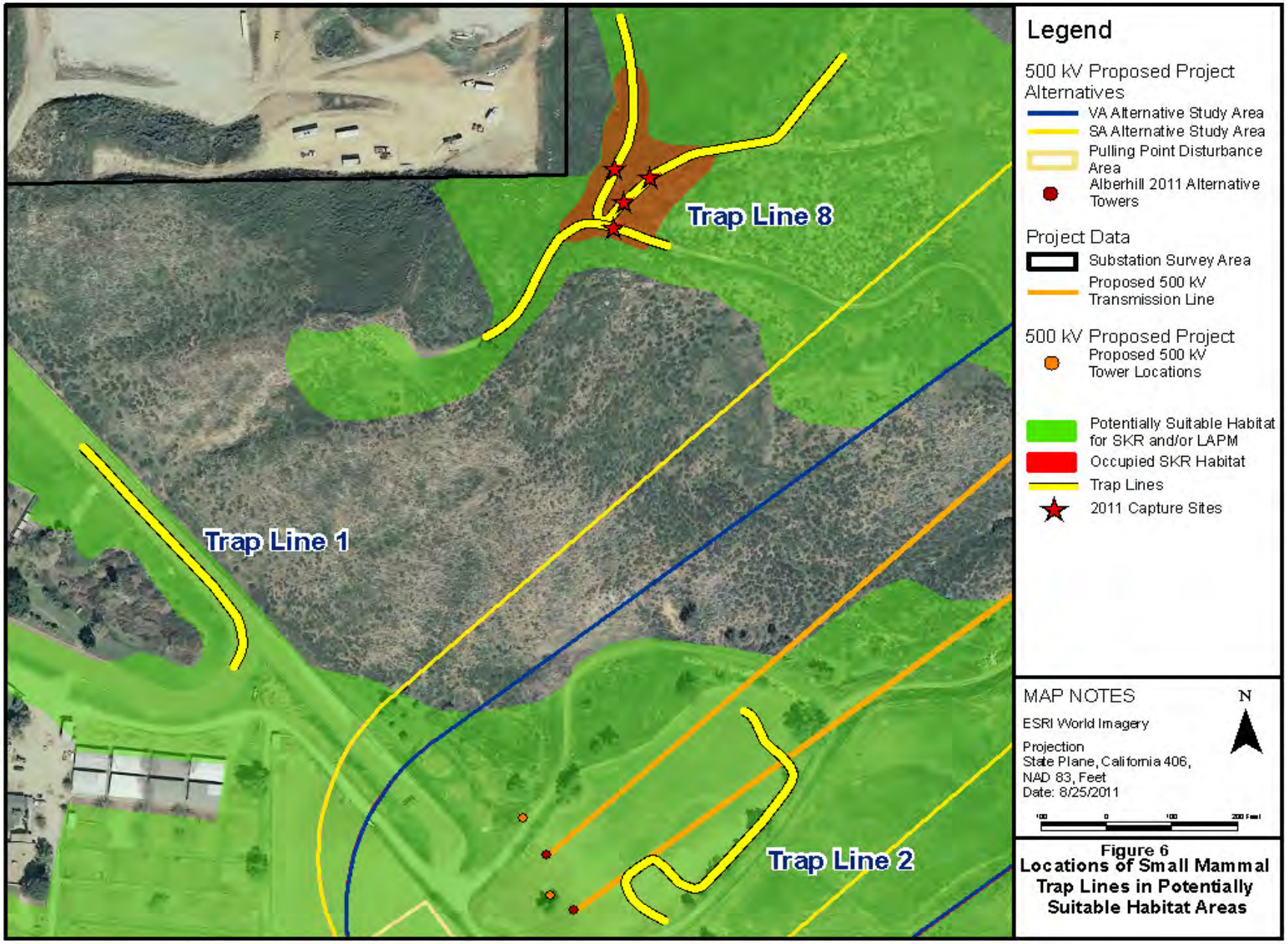


Figure 6
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

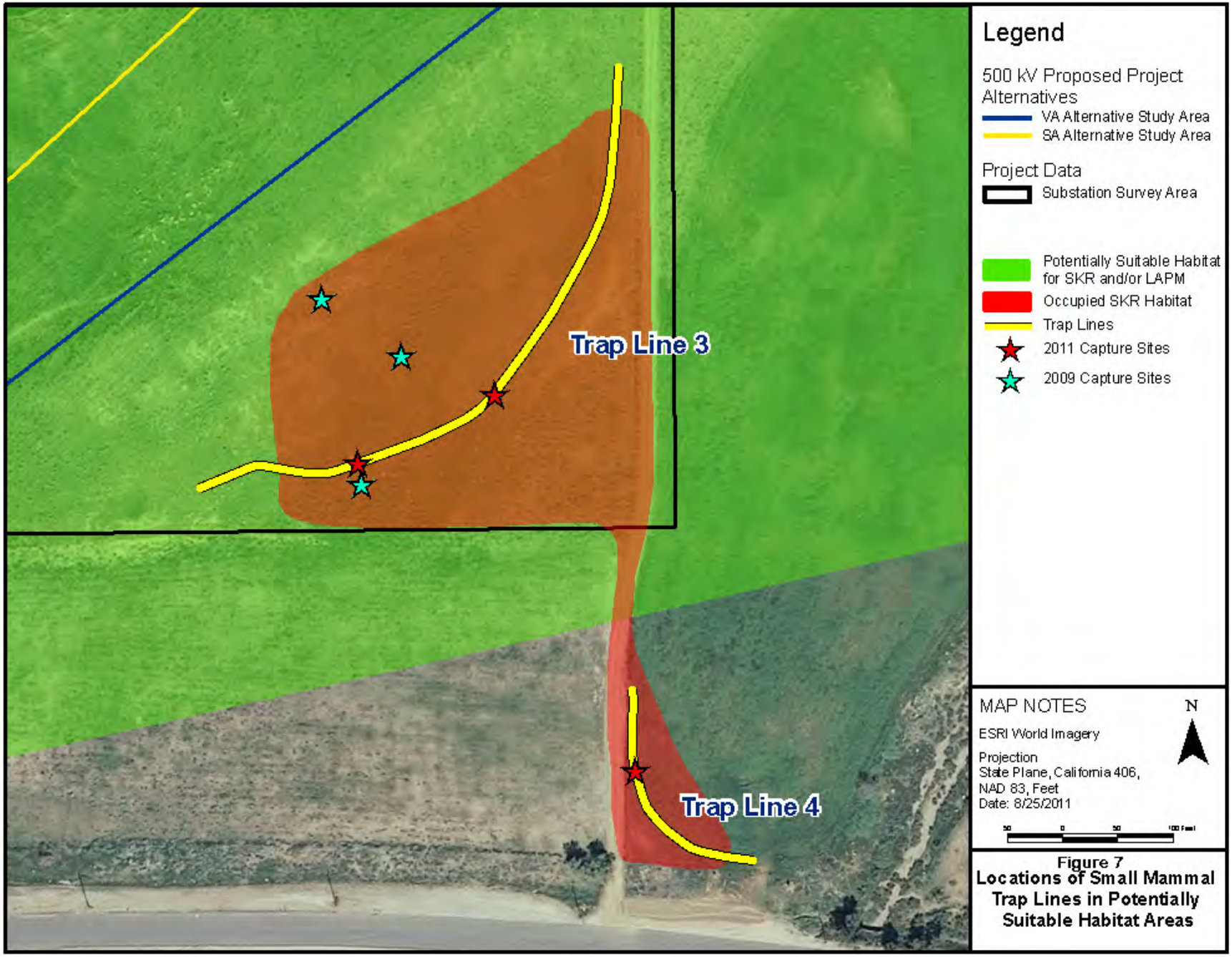


Figure 7
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

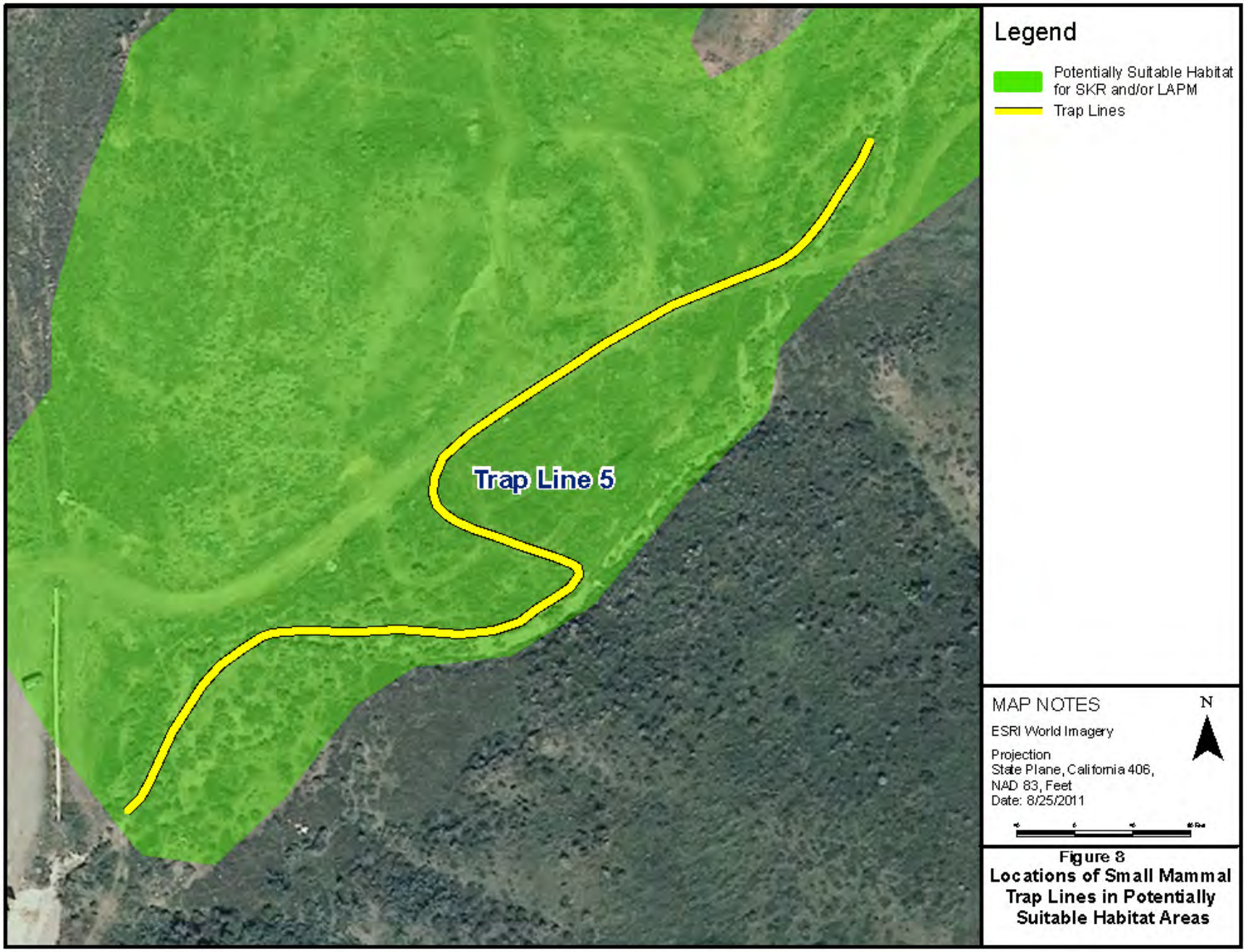


Figure 8
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

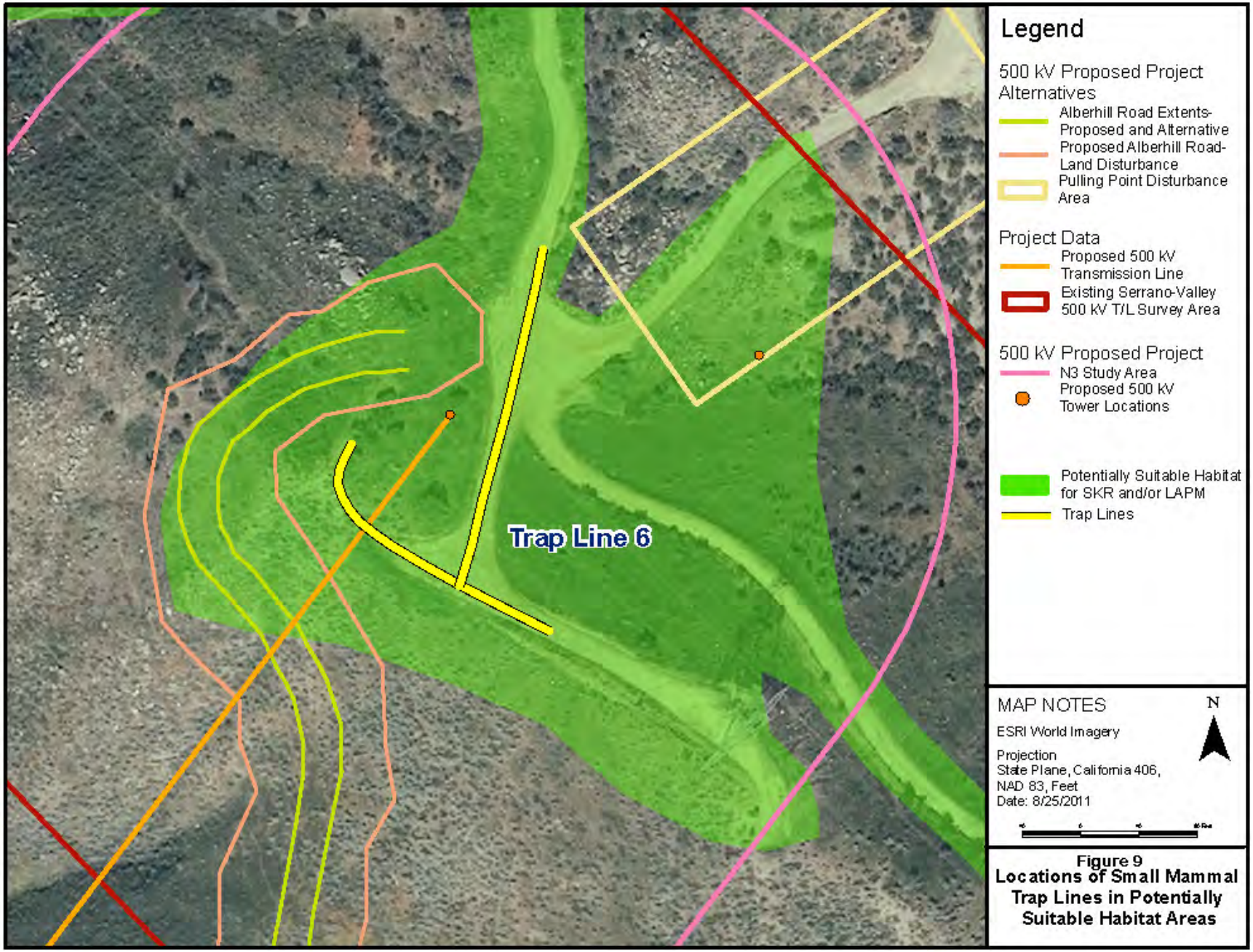


Figure 9
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

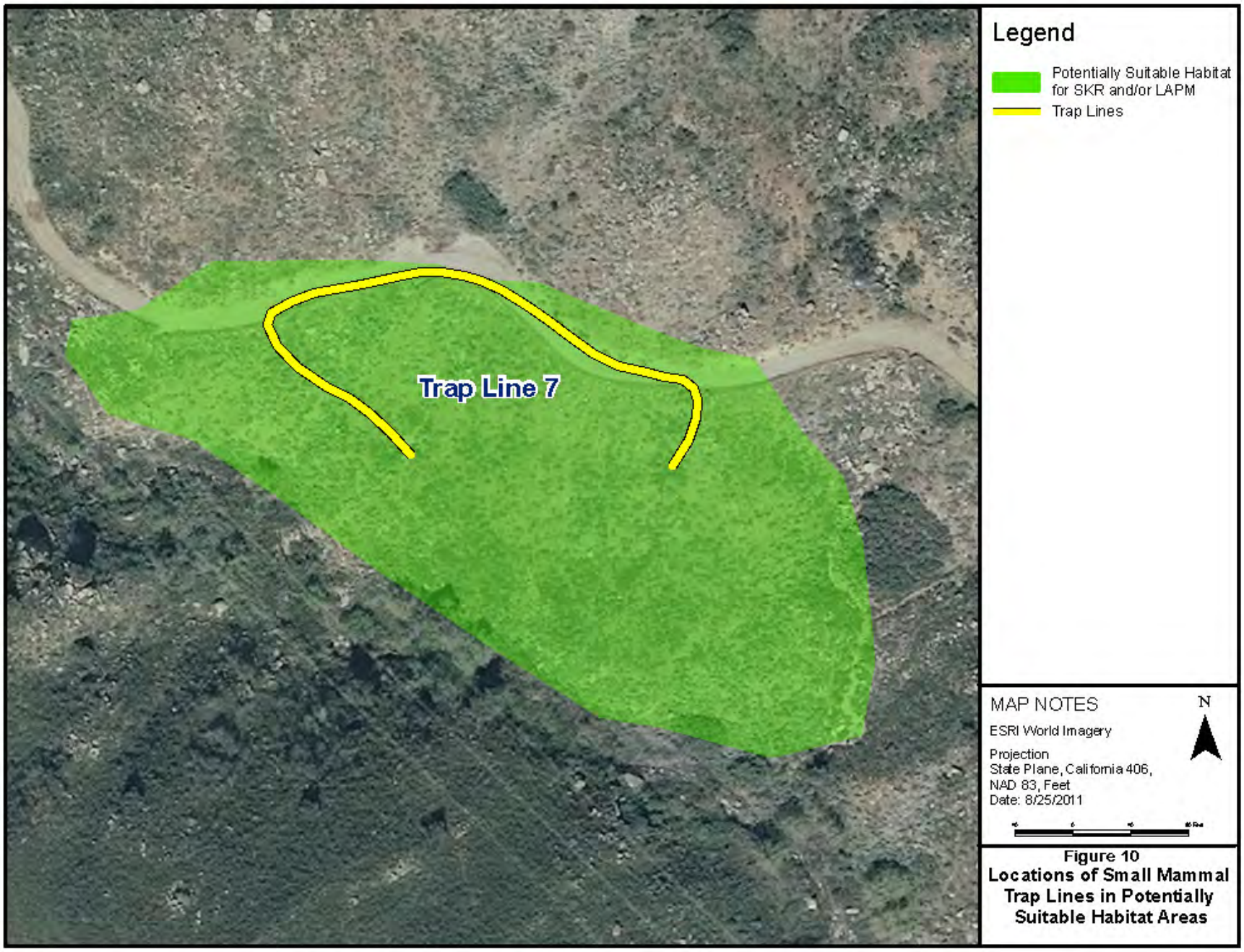


Figure 10
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

APPENDIX B

Figures 11- 17 – Overall views of the 115kv project area, potential habitat and trap lines

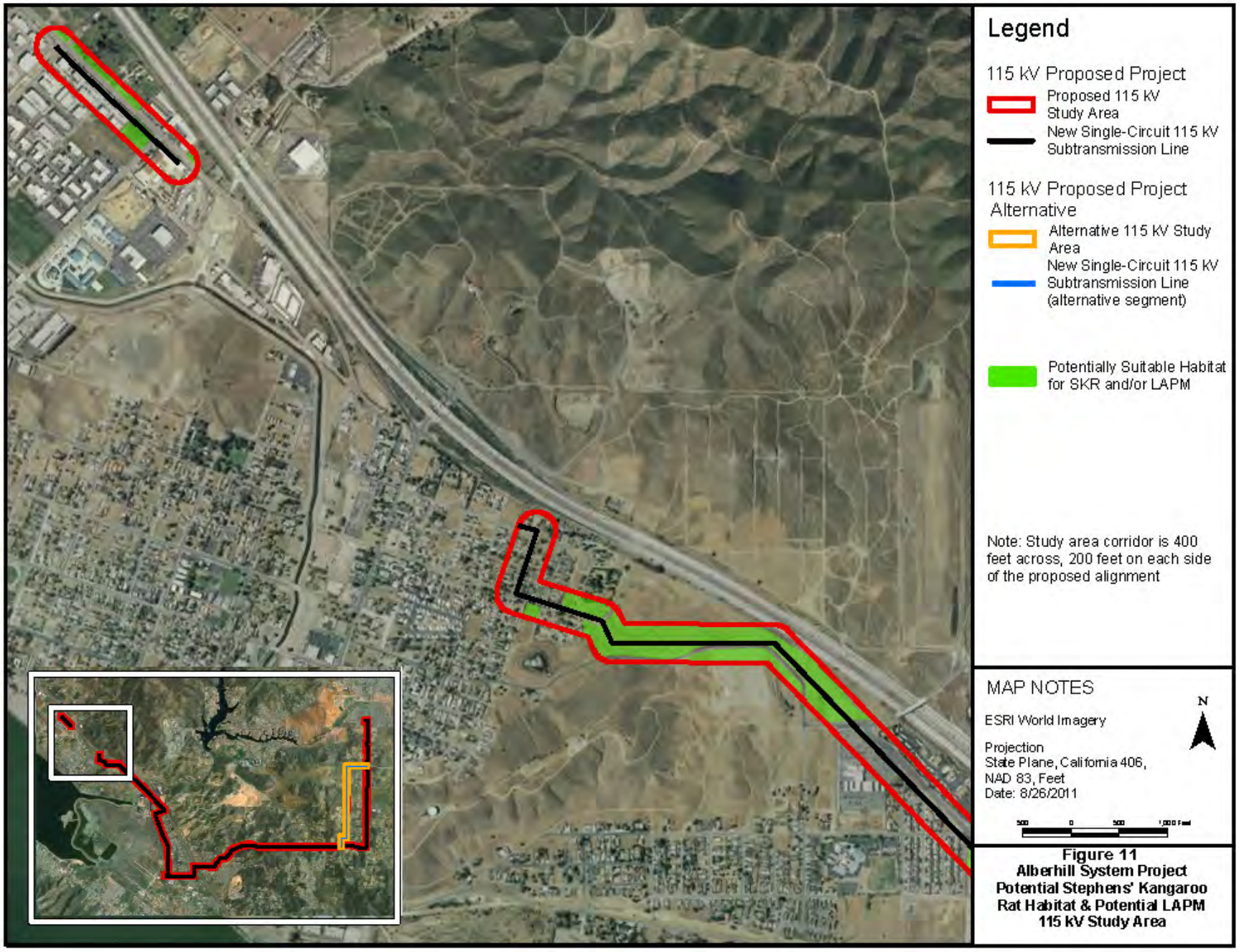


Figure 11
Alberhill System Project
Potential Stephens' Kangaroo Rat Habitat & Potential LAPM
115 kV Study Area

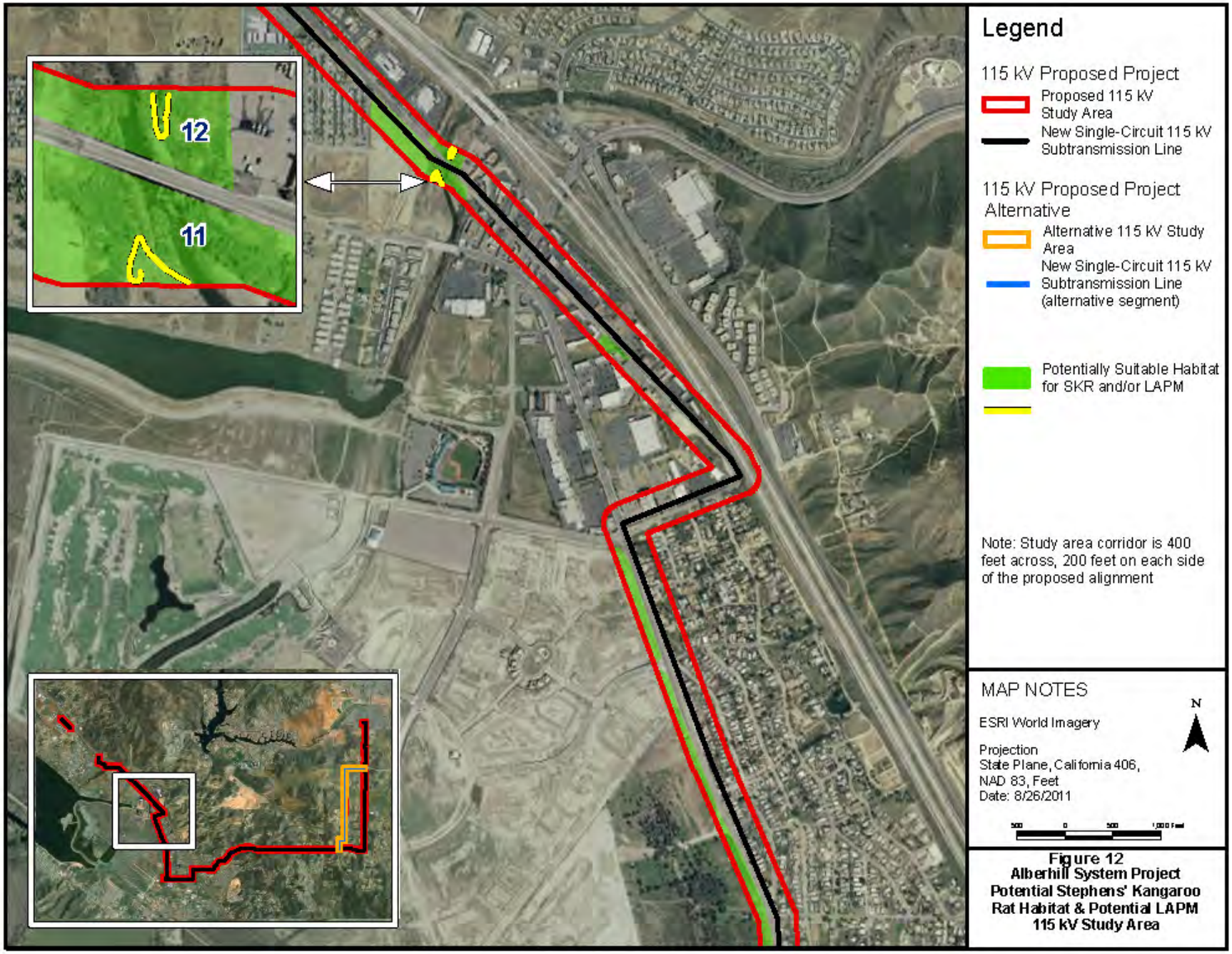


Figure 12
Alberhill System Project
Potential Stephens' Kangaroo Rat Habitat & Potential LAPM
115 kV Study Area

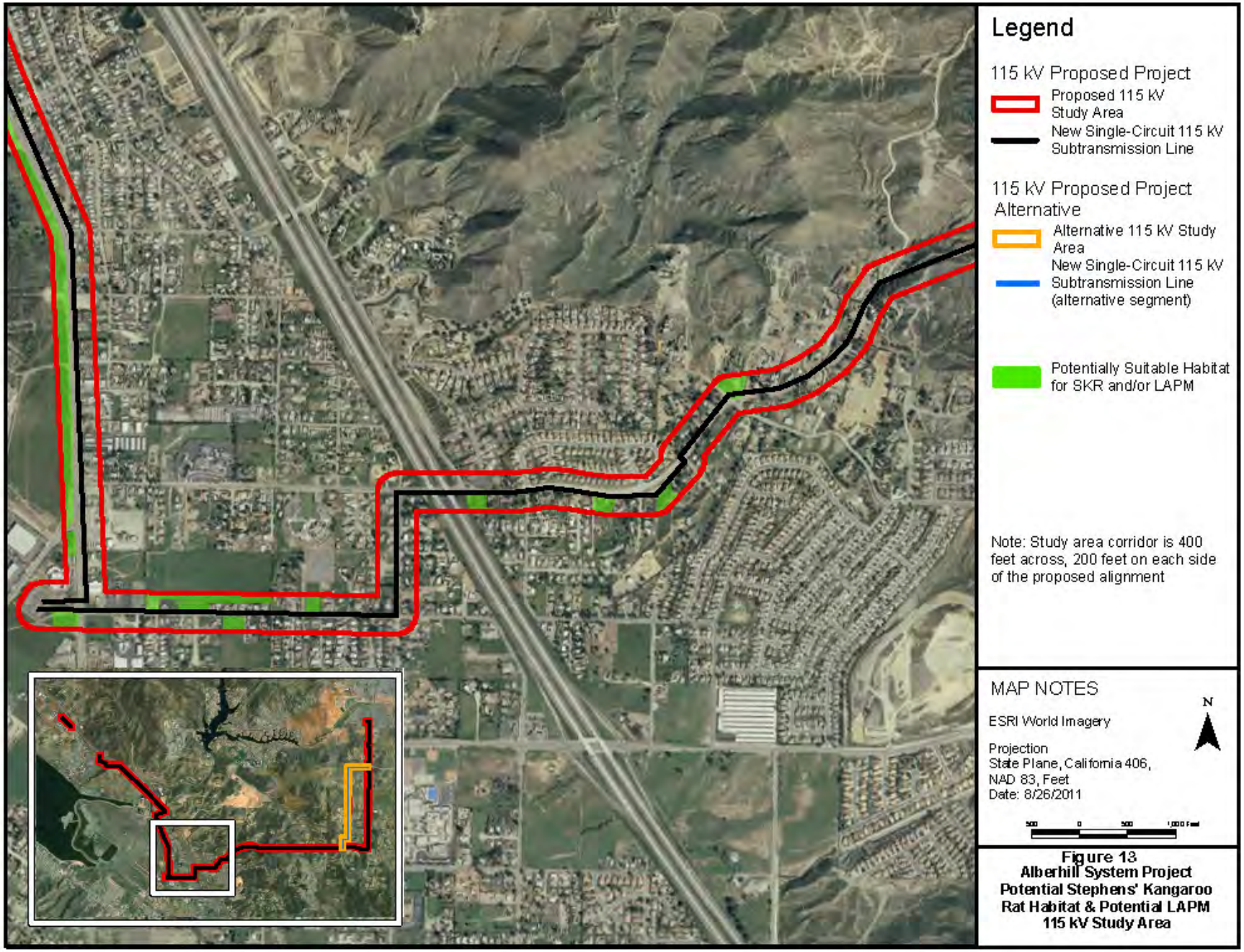


Figure 13
Alberhill System Project
Potential Stephens' Kangaroo Rat Habitat & Potential LAPM
115 kV Study Area

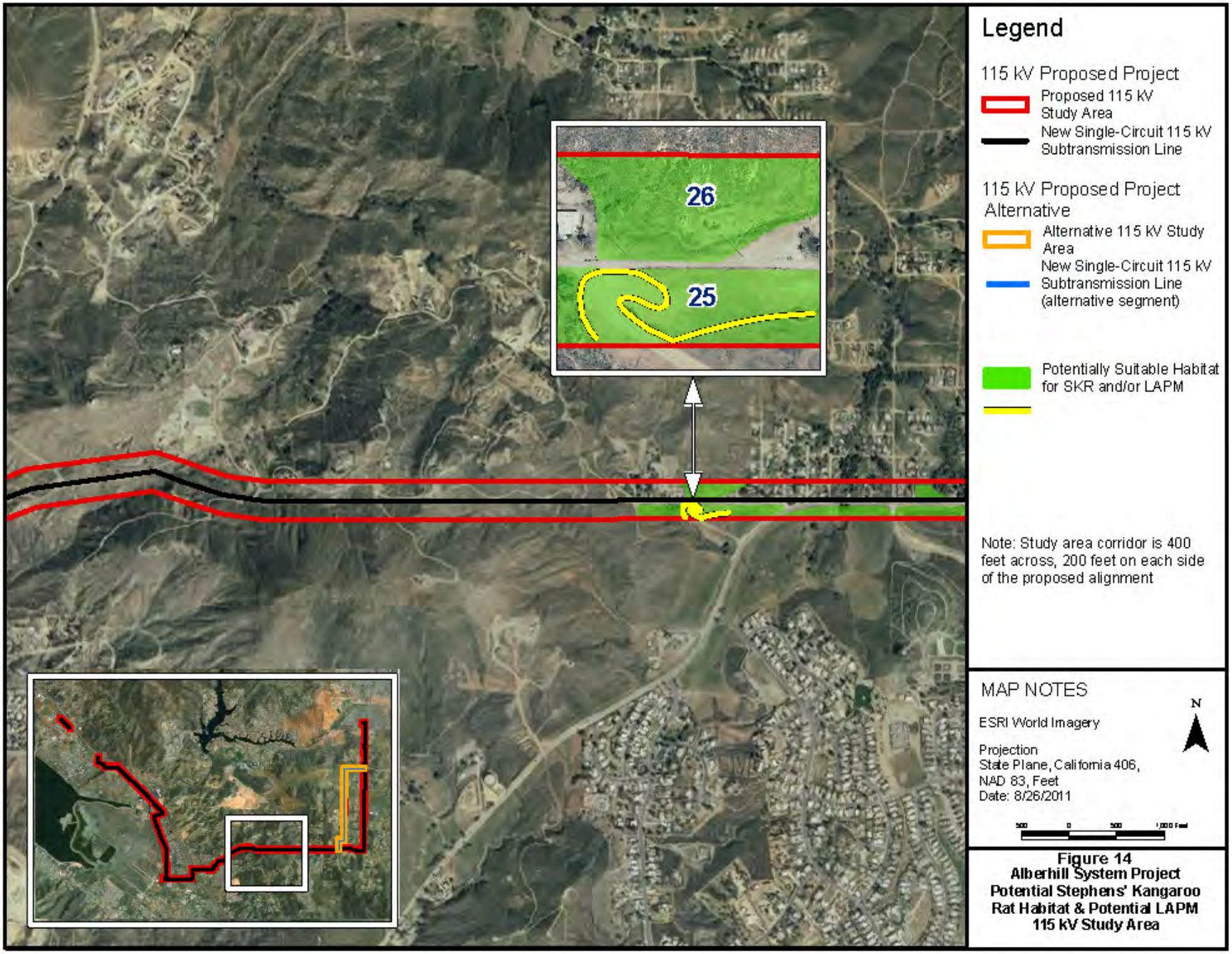


Figure 14
Alberhill System Project
Potential Stephens' Kangaroo Rat Habitat & Potential LAPM
115 kV Study Area

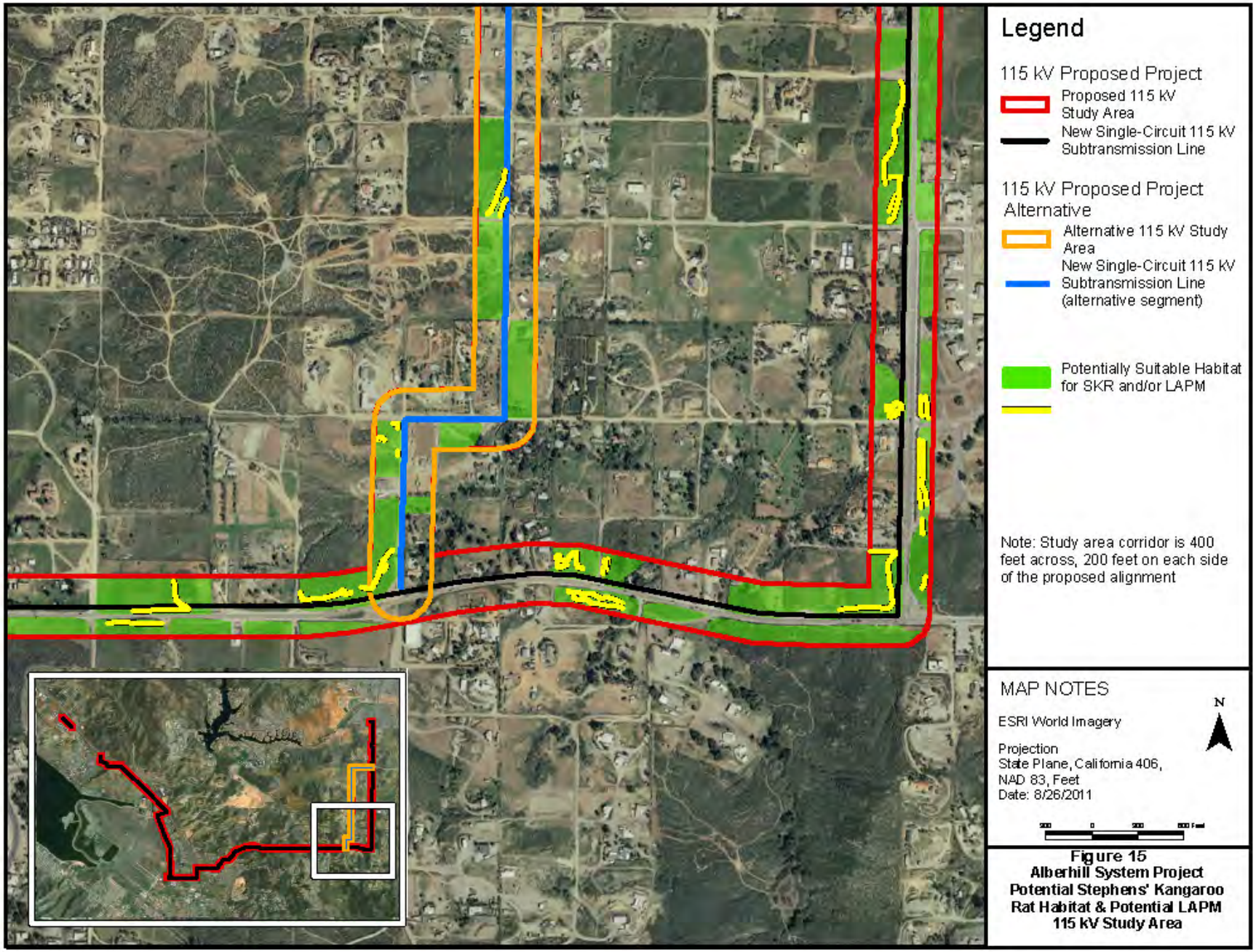


Figure 15
Alberhill System Project
Potential Stephens' Kangaroo Rat Habitat & Potential LAPM 115 kV Study Area

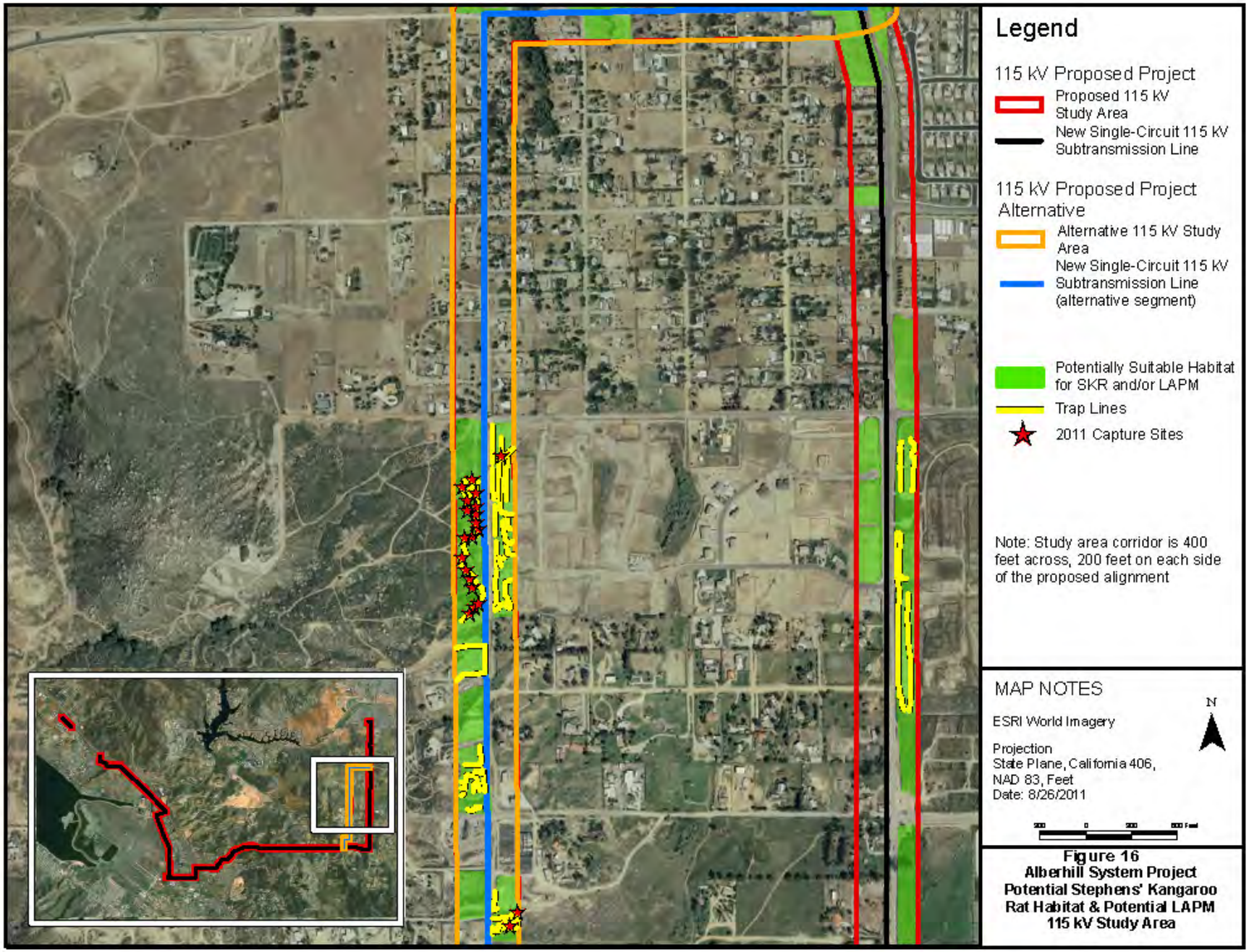


Figure 16
Alberhill System Project
Potential Stephens' Kangaroo Rat Habitat & Potential LAPM
115 kV Study Area

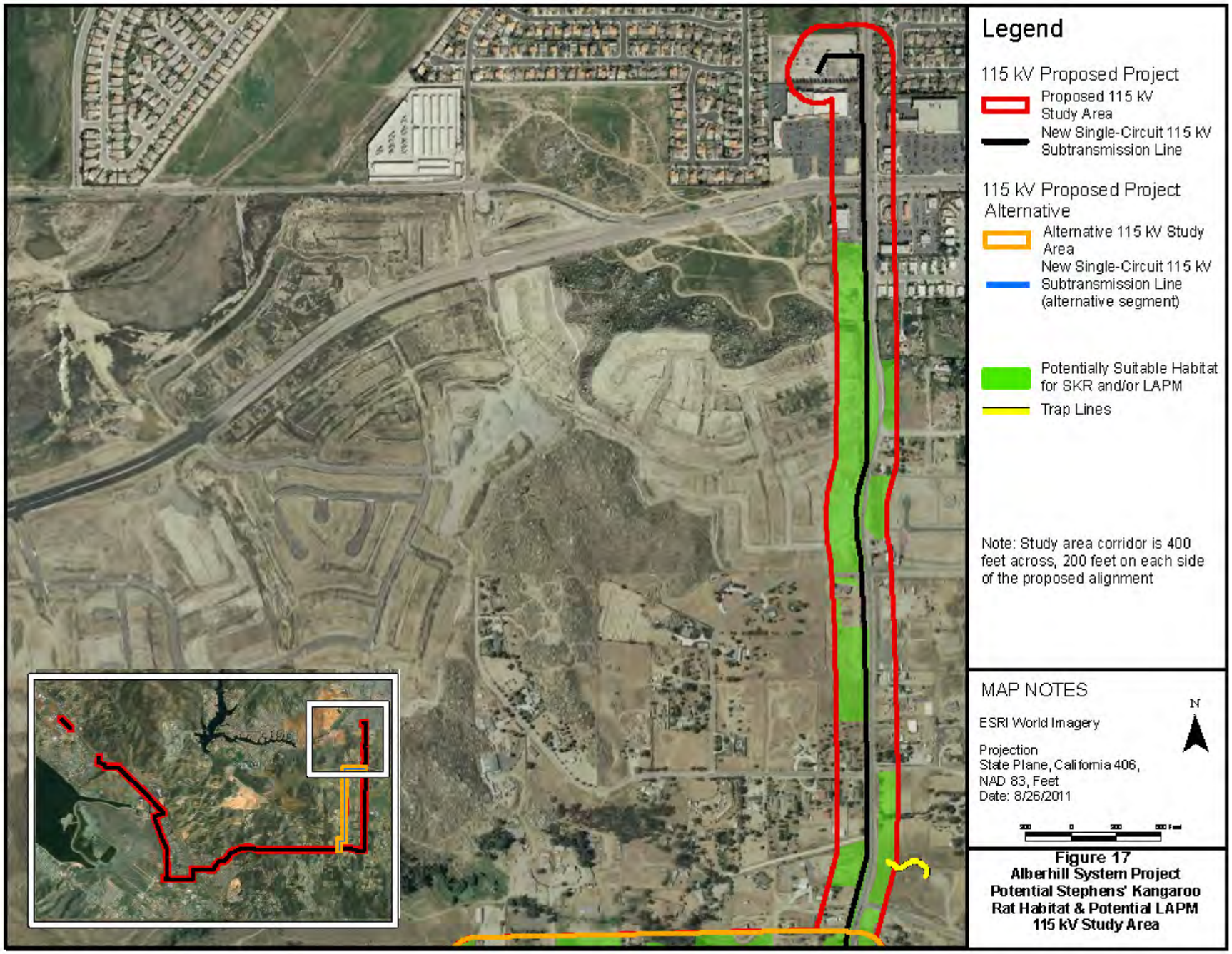


Figure 17
Alberhill System Project
Potential Stephens' Kangaroo Rat Habitat & Potential LAPM
115 kV Study Area

APPENDIX C

Figures 18-31 – Close up views of trap lines and occupied SKR habitat

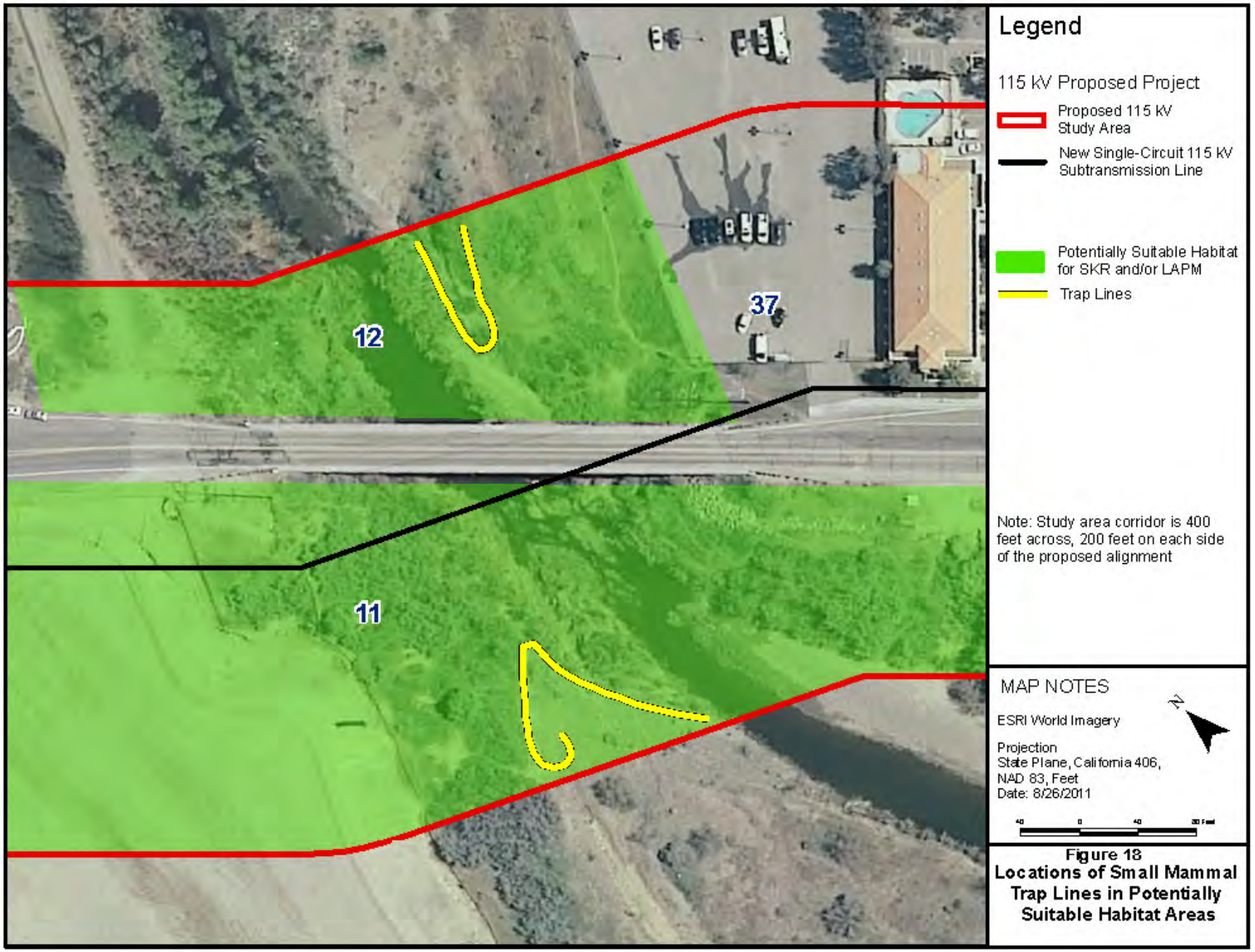


Figure 18
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

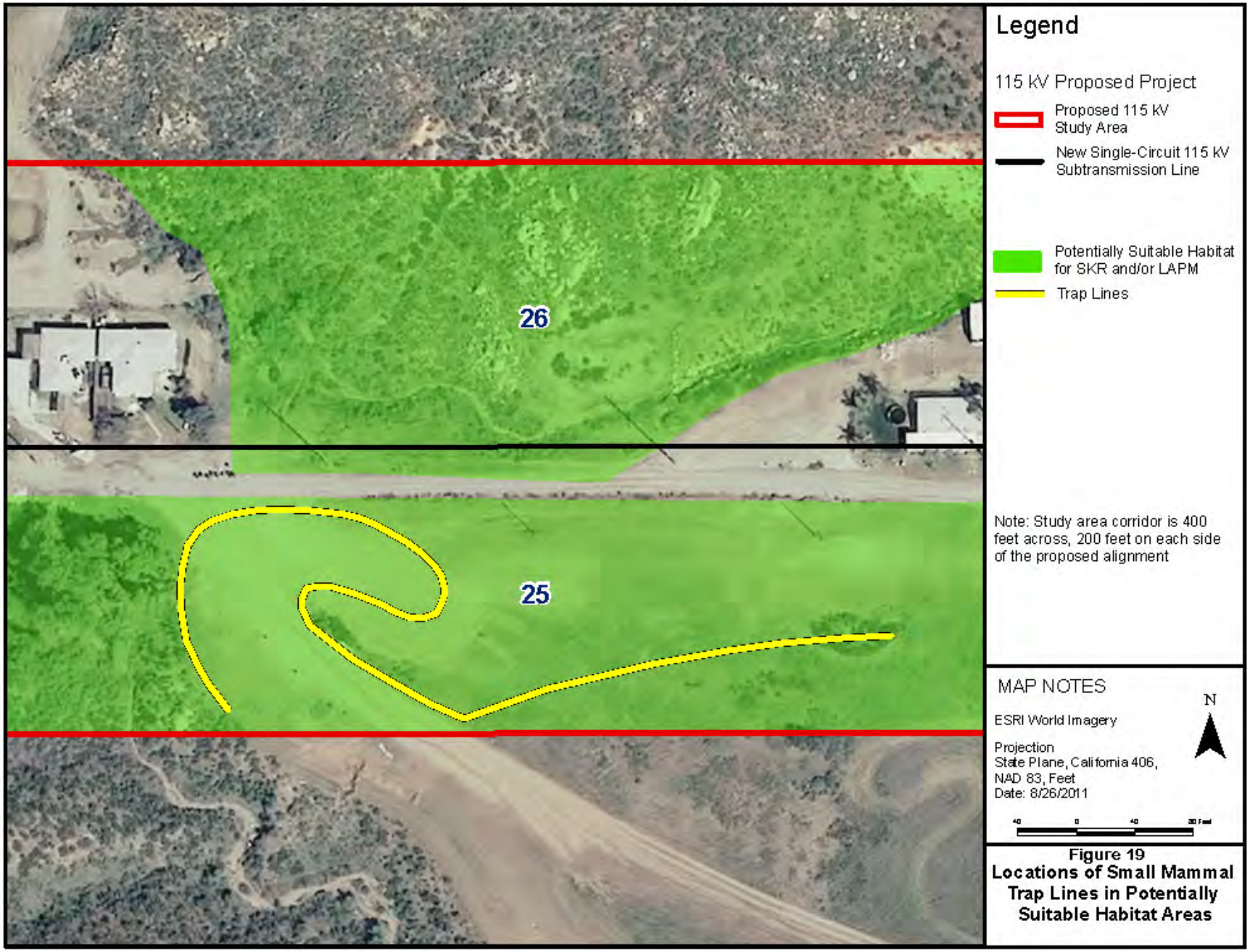


Figure 19
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

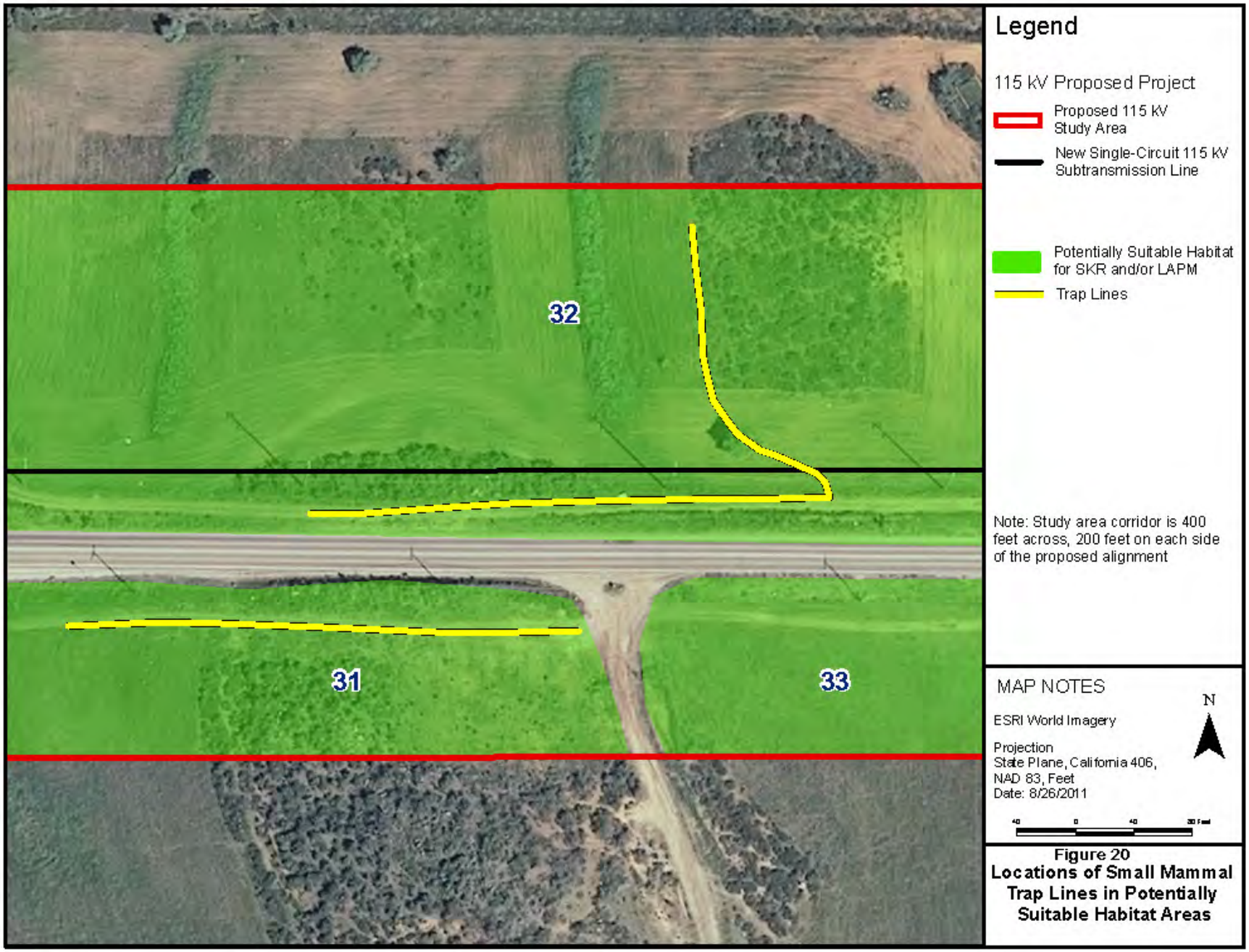


Figure 20
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

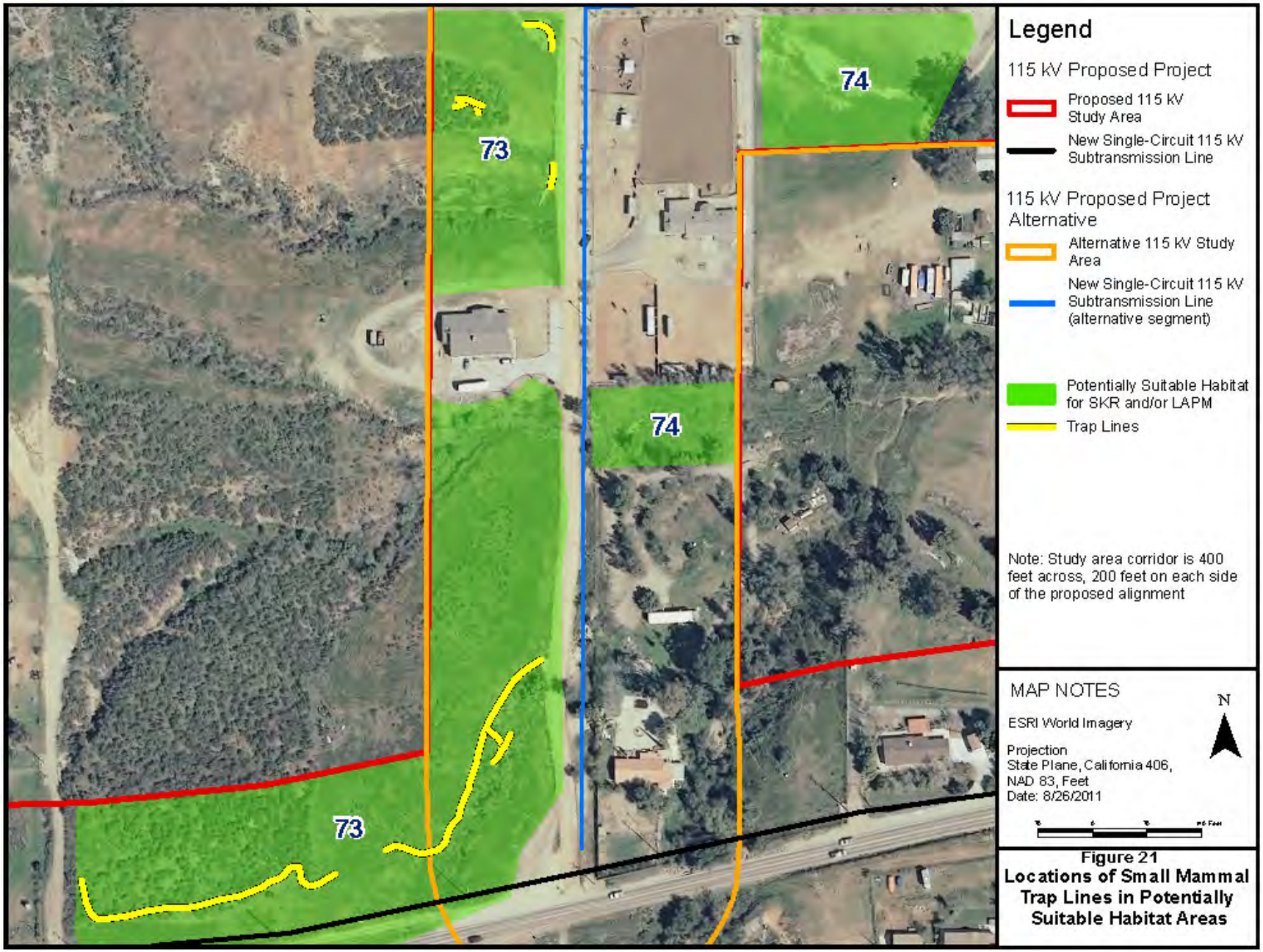


Figure 21
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

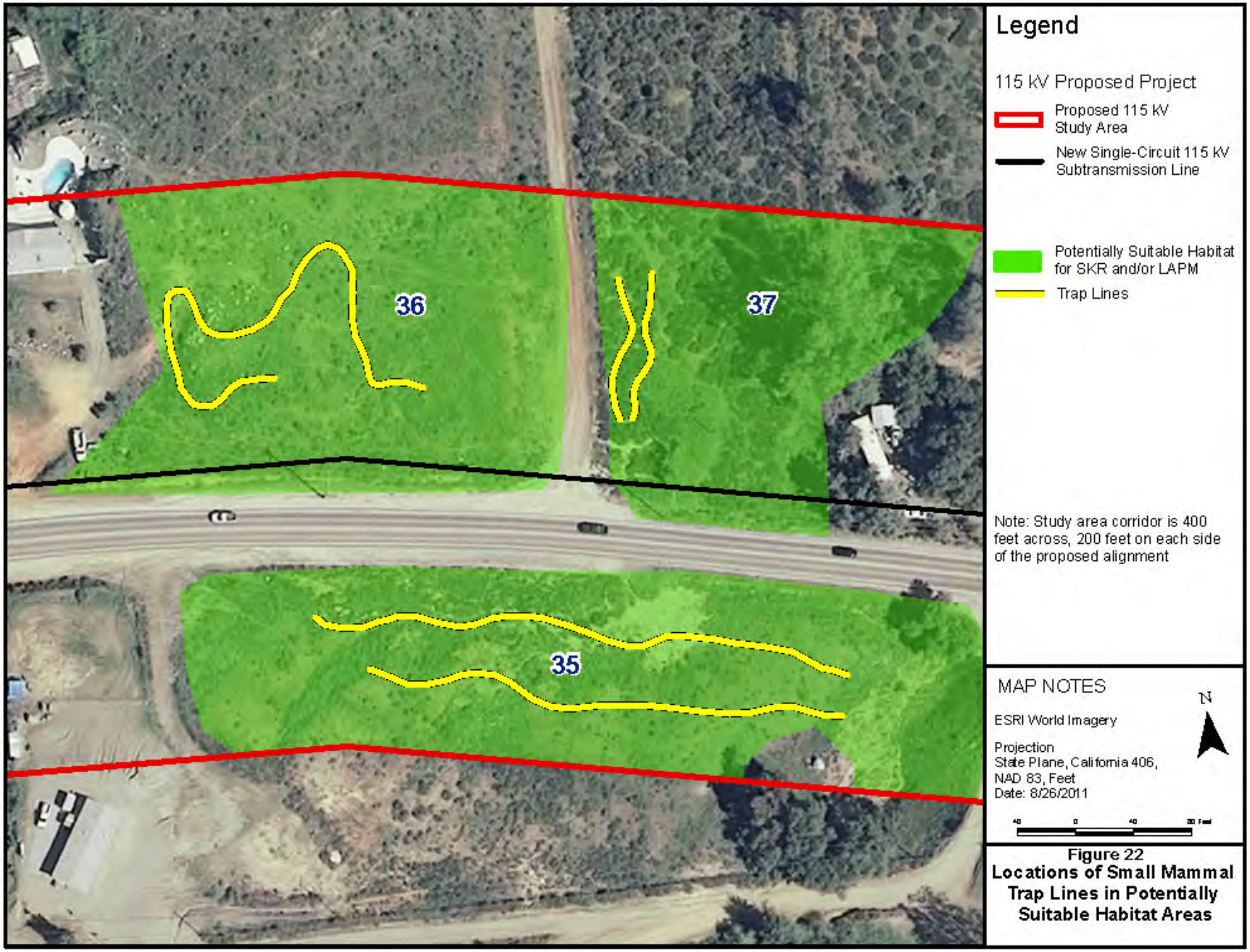


Figure 22
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

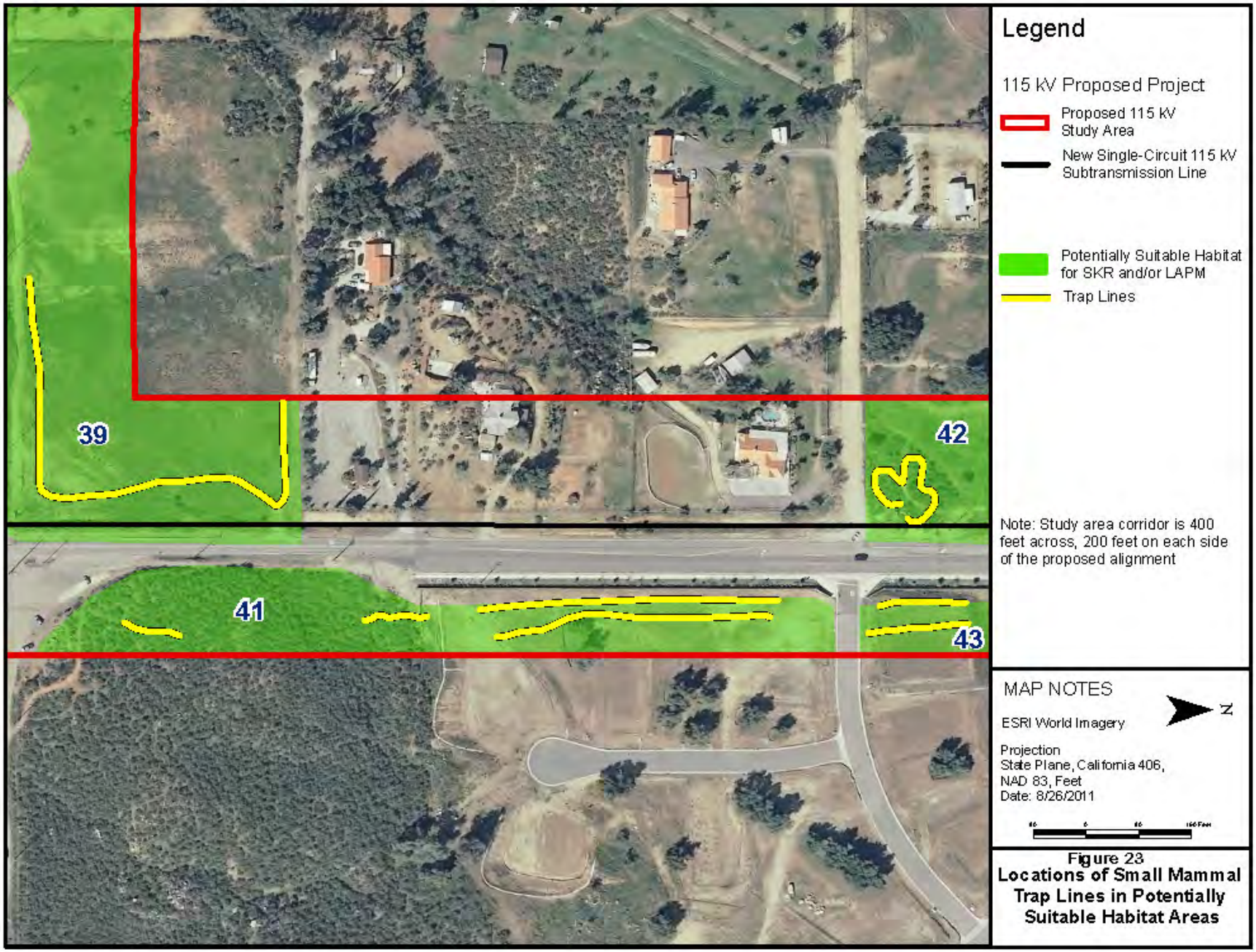


Figure 23
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

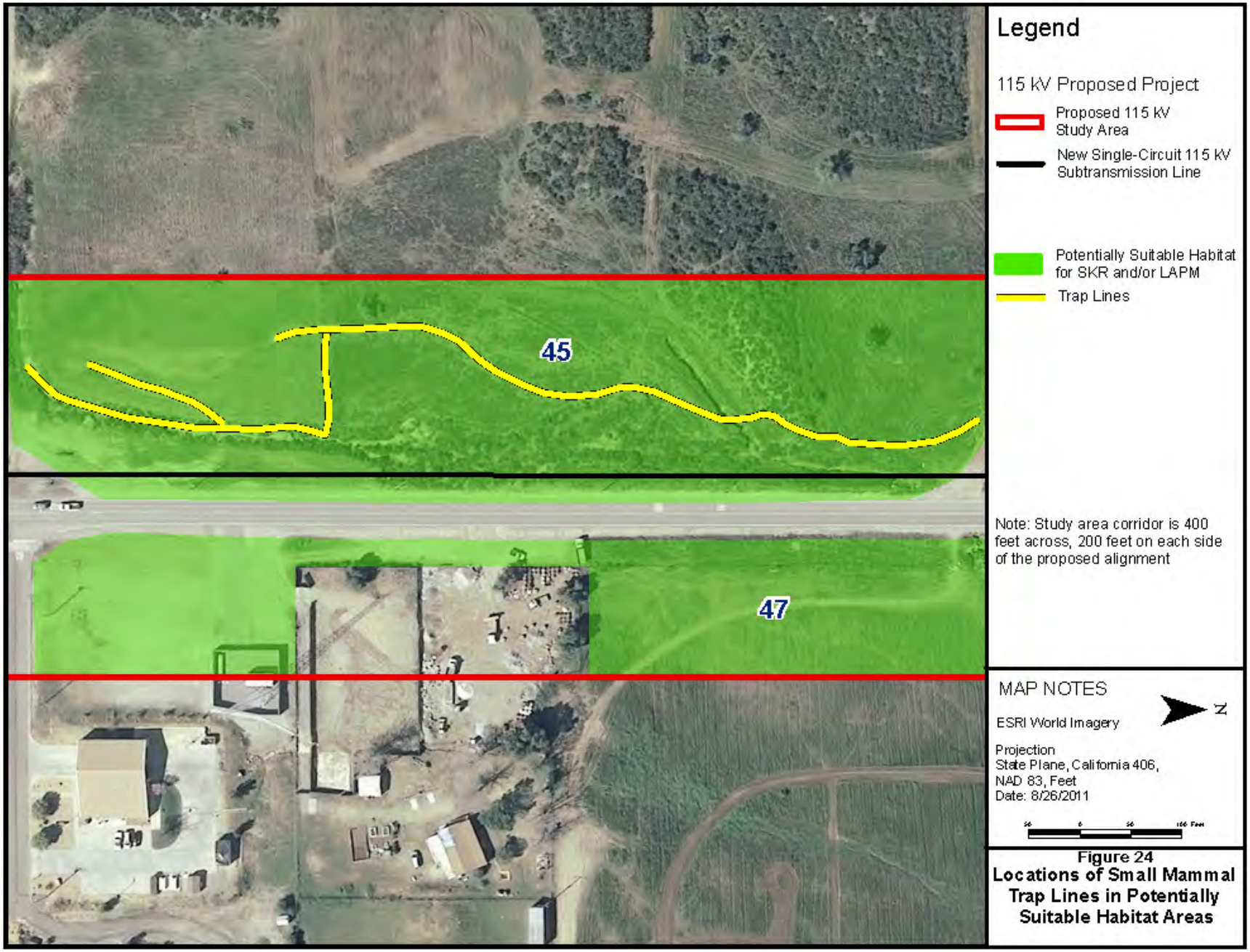


Figure 24
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

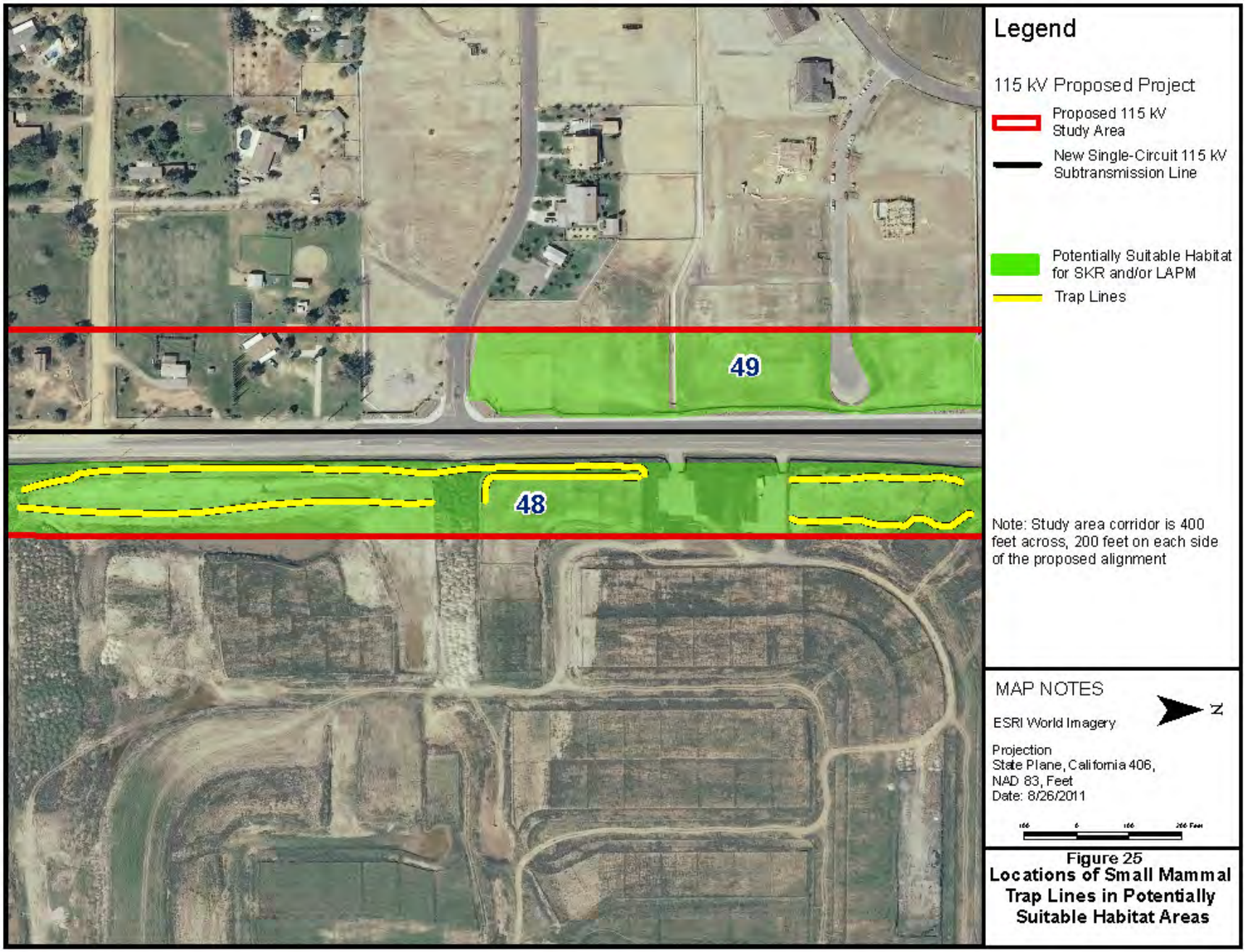


Figure 25
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

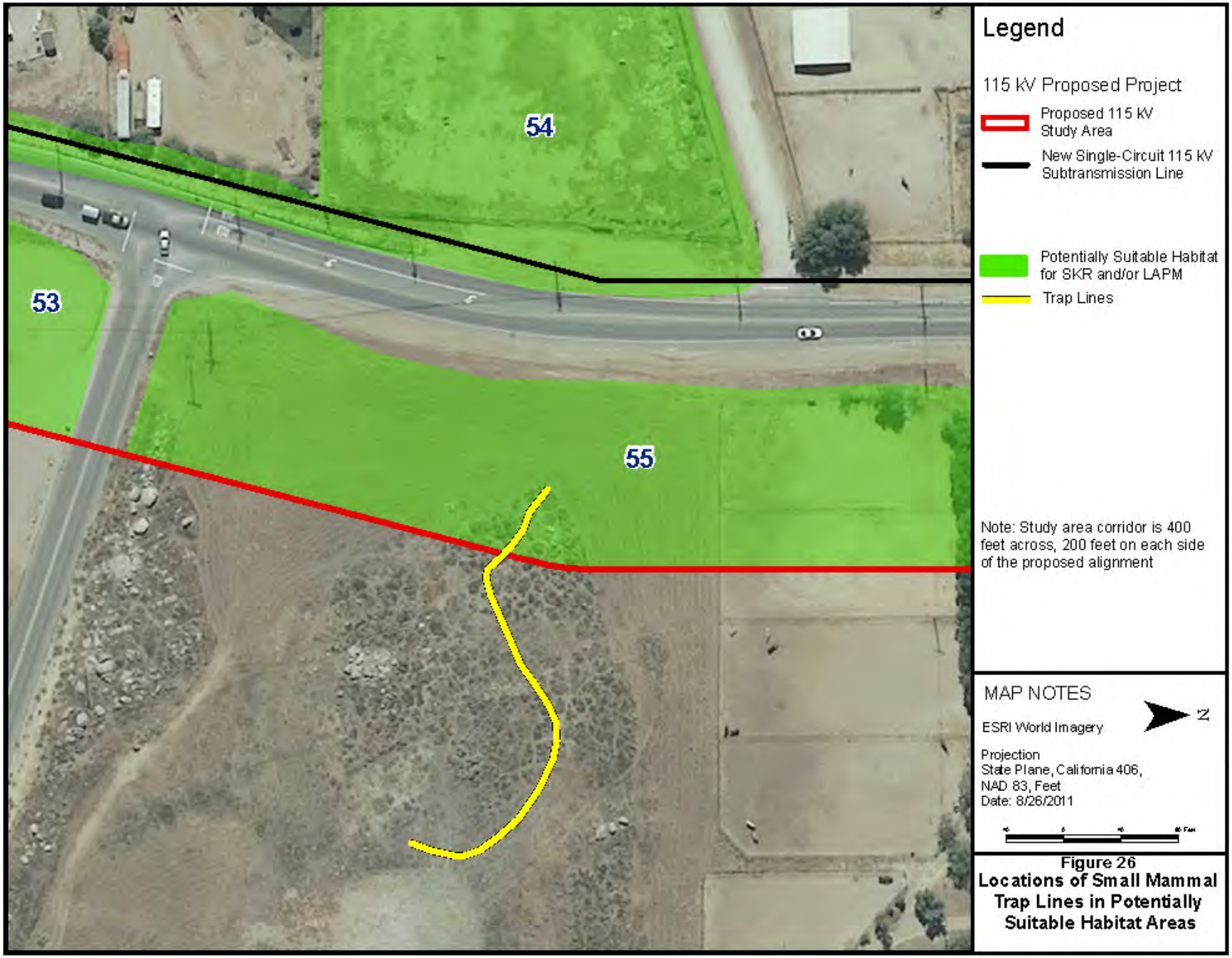


Figure 26
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

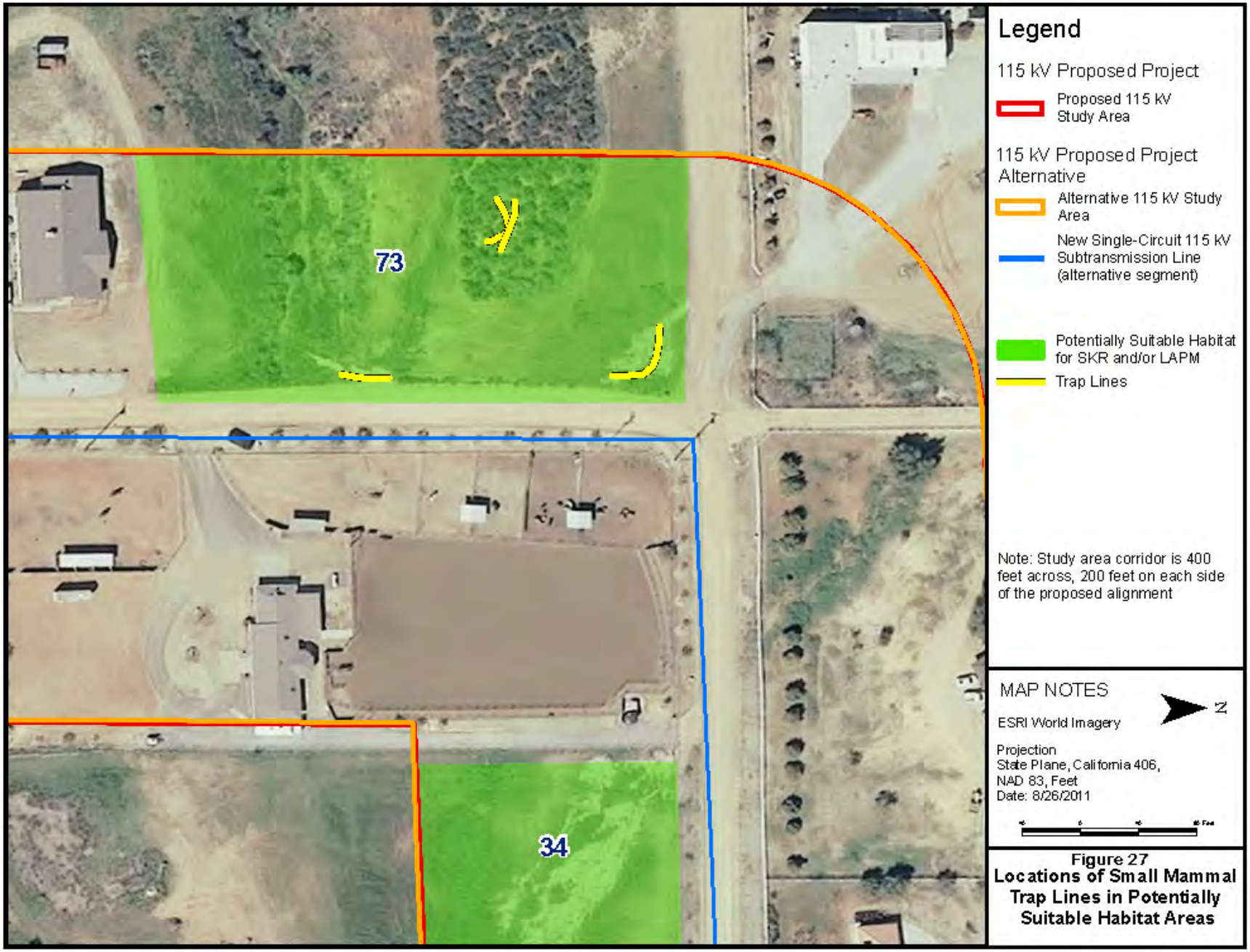


Figure 27
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

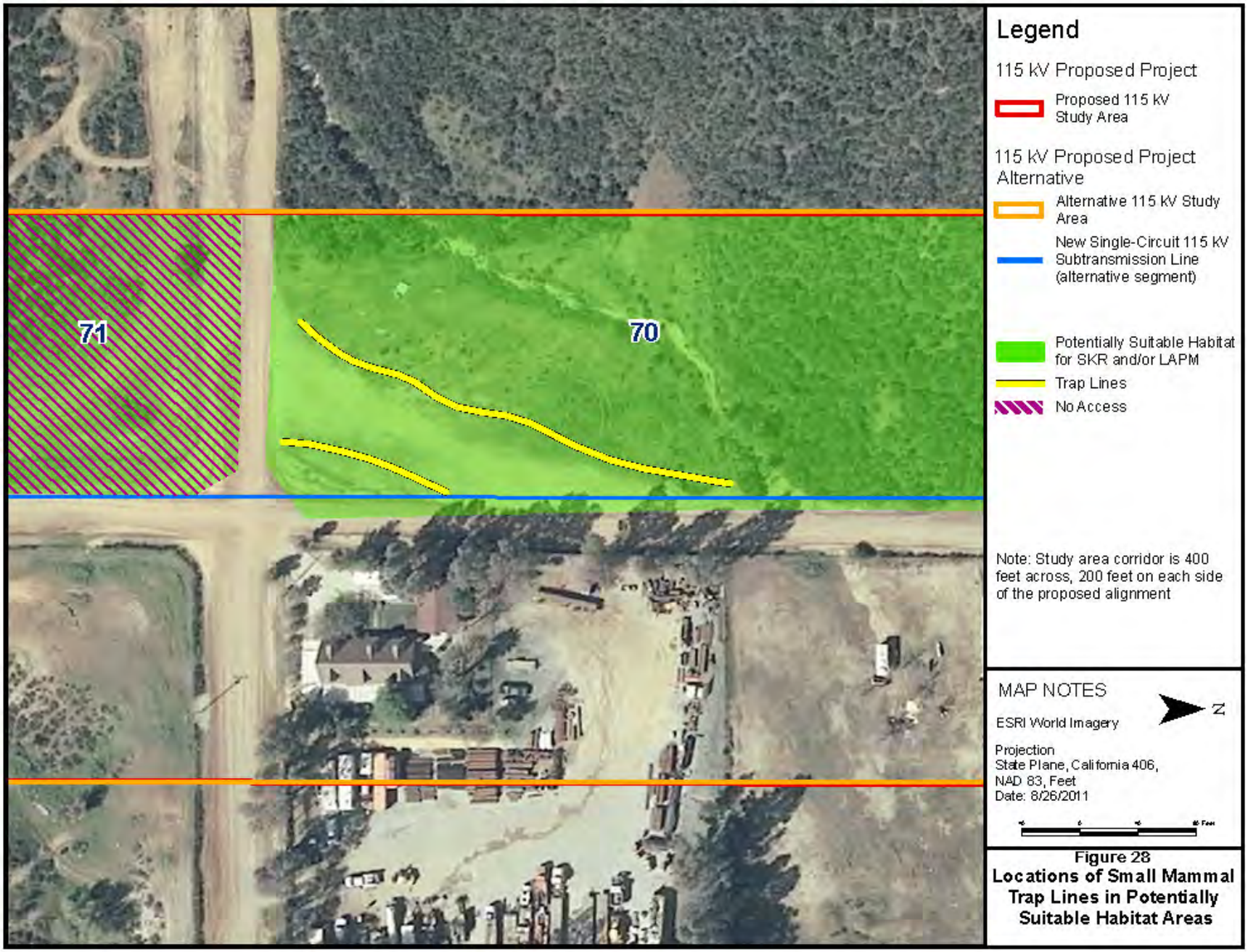


Figure 28
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

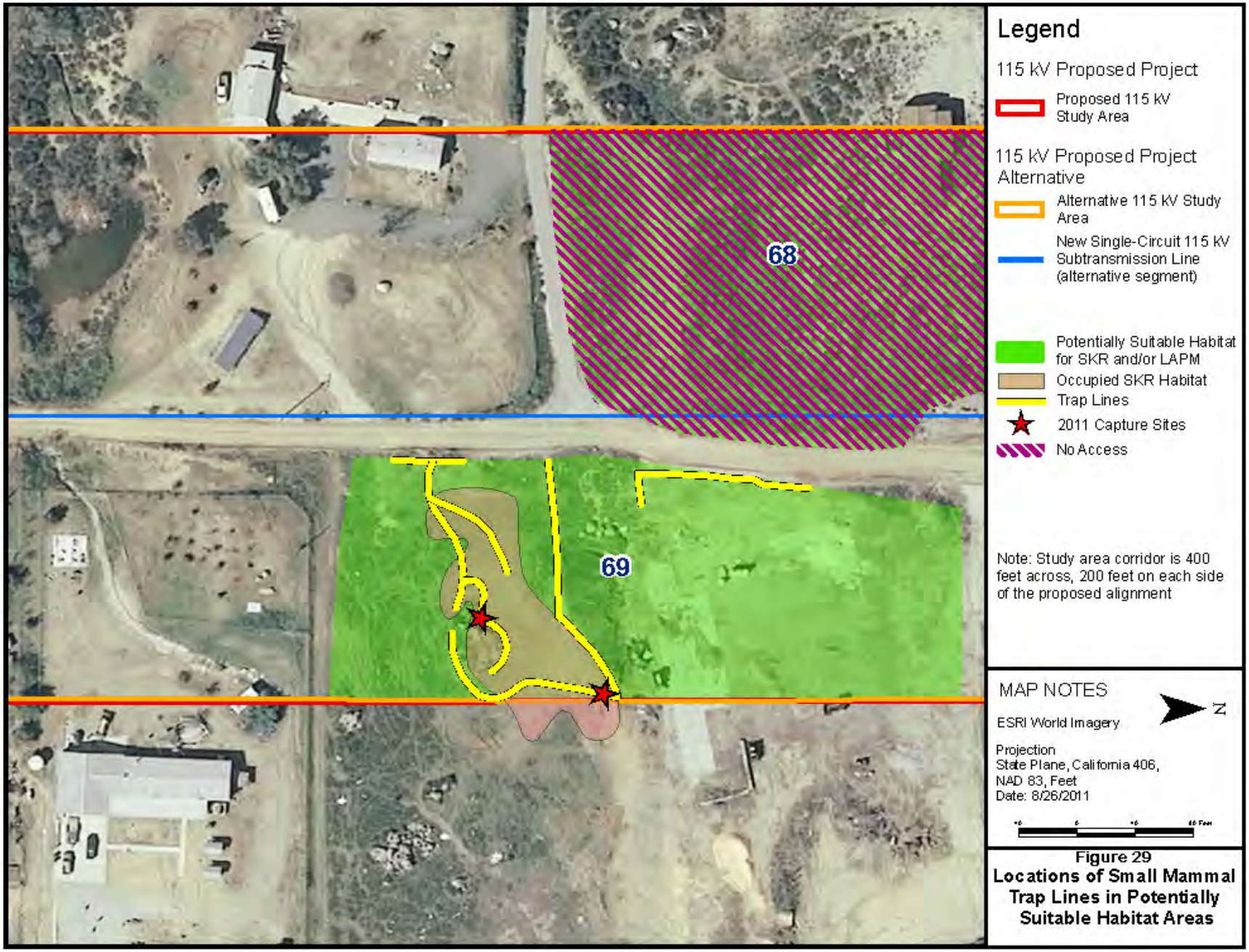


Figure 29
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

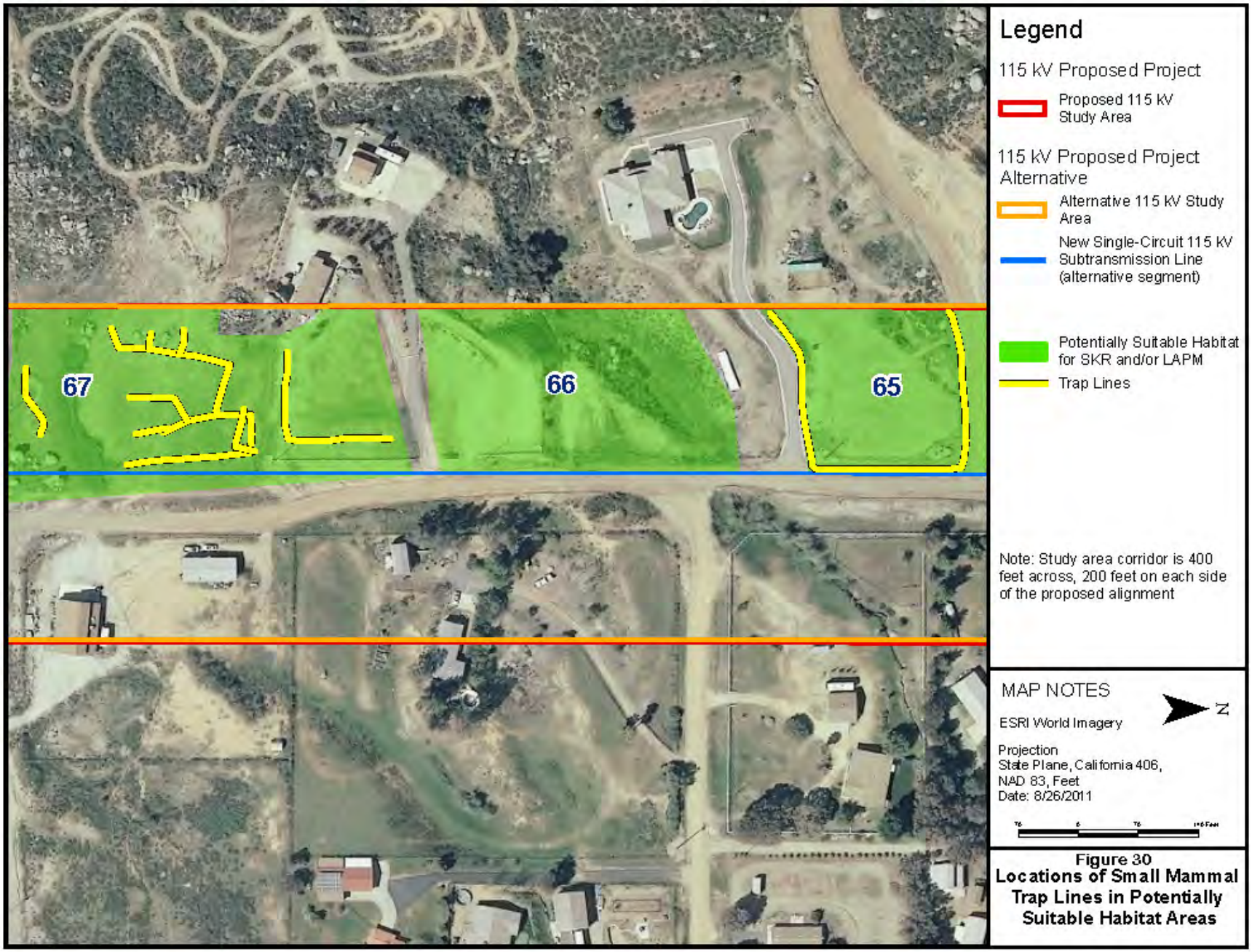


Figure 30
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

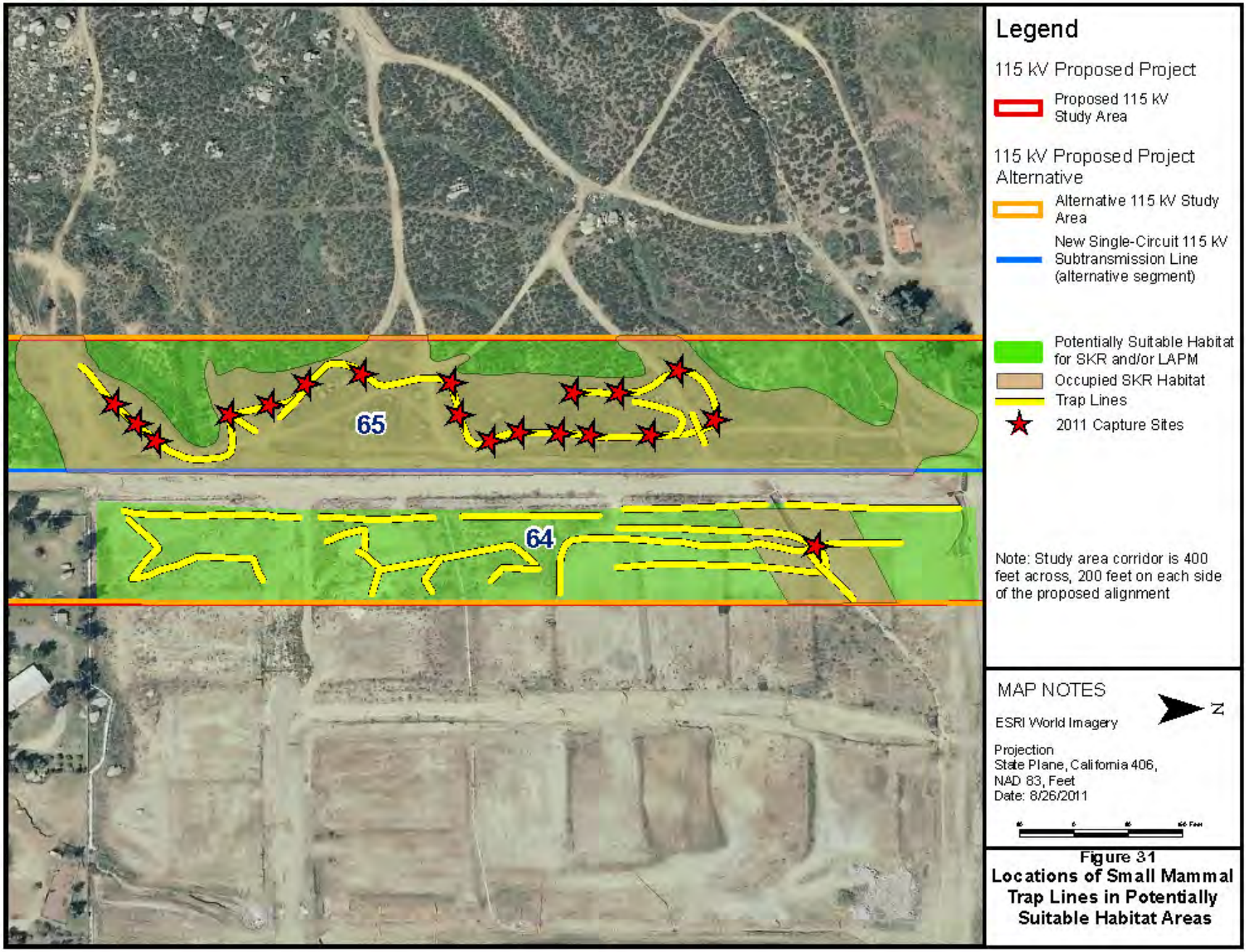


Figure 31
Locations of Small Mammal Trap Lines in Potentially Suitable Habitat Areas

F4
2012 Focused Species Survey
Reports

February 28, 2012

Adelina Muñoz
Southern California Edison
1218 S. Fifth Avenue
Monrovia, California 91016

Subject: Alberhill System Project, Fairy Shrimp Habitat Assessment

Dear Ms. Muñoz:

AECOM conducted a habitat assessment for the federally-listed San Diego fairy shrimp (*Branchinecta sandiegonensis*), vernal pool fairy shrimp (*Branchinecta lynchi*), and Riverside fairy shrimp (*Streptocephalus woottoni*) along the Alberhill 115-kilovolt (kV) project alignment at two depressions previously identified as habitat and to assess the potential for listed vernal pool branchiopods to occur.

Based on a fairy shrimp habitat assessment conducted by E Read & Associates, Inc. in 2010, two potential ephemeral pools were observed within the buffer zone of the proposed Alberhill 115-kV transmission line (identified in the report as Depression #1 and Depression #2). During the E Read & Associates, Inc. assessment, most of the proposed alignment and 200-foot survey buffer was observed to be either developed, under development, or otherwise disturbed.

Depression #1 was observed to be about 16 square feet in size, located west of Mission Trail near the intersection of Victorian Lane, upslope from a culvert and about 100 feet west of the transmission centerline. Although no water was present during the prior assessment (April 29, 2010), the soil appeared damp and had mud cracks. On May 5, 2010, the depression was no longer damp. Plant species associated with the depression included cressa (*Cressa truxillensis*), purple sand spurry (*Spergularia rubra*), an unidentified herb (possibly *Lythrum* sp.), and nonnative annual grasses (*Polypogon monspeliensis, Avena* sp., *Lolium* sp.).

Depression #2 was about 200 square feet in size and located at the southwest corner of Bundy Canyon Road and Harvest Way East, about 85 feet south of the transmission centerline. During the prior assessment field visits (April 29 and May 5, 2010), water was present within two tire-ruts situated within a larger area of fine sediment that appeared to have settled out from water backed up above a culvert. The tire ruts and patterns on the ground suggested disking in the recent past. Observed flow patterns indicated that during rain events, sheet flow from Harvest Way East runs into the depression and then into a culvert at Bundy Canyon Road. No vegetation was found within the tire ruts during the site visit, but these ruts were surrounded by dense nonnative annual grassland dominated by ryegrass (*Lolium* sp.) and oat (*Avena* sp.).

No other vernal pools, swales, ephemeral pools, or stock ponds were observed within the buffer zone of the proposed Alberhill 115-kV transmission line.

E Read & Associates, Inc. concluded that the two depressions observed in the survey zone of the proposed Alberhill 115-kV transmission line provided marginally suitable habitat for Riverside fairy shrimp and are unsuitable for Santa Rosa Plateau fairy shrimp. The potential for vernal pool fairy shrimp to occur in the two depressions within the buffer zone of the proposed transmission line was considered moderate depending on the inundation periods for each depression. It was recommended that all proposed project activities avoid both depressions to avoid potentially impacting vernal pool fairy shrimp. It was also recommended that all proposed project activities do not alter water flow into or out of the depressions.

Based on the results of the previous habitat assessment, Southern California Edison (SCE) has requested that AECOM conduct a follow-up field visit to assess the two identified pools/basins along the Alberhill 115-kV project for their suitability for fairy shrimp. SCE requested that specific attention be focused on the pool micro-watersheds and their proximity to proposed construction components (i.e., pole locations, construction staging areas, etc.). If avoidance of the pools could not be determined during the follow-up habitat assessment, AECOM recommended that dry-season soil/cyst collection be completed in accordance with *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (USFWS 1996), augmented by genetic analysis of cysts (if found) to determine presence/absence of listed species. This letter report summarizes AECOM's results of the habitat assessment and provides a determination as to whether a protocol survey is required due to potential impacts to the depressions during construction activities. It should be noted that the identification of potential fairy shrimp habitat is based on an analysis level only and does not include definitive surveys for the presence or absence of fairy shrimp.

LVPB DESCRIPTION, RANGE, AND HABITAT REQUIREMENTS

Listed vernal pool branchiopods (LVPB) are federally listed freshwater invertebrates endemic to California vernal pools. Five of these species are in the aquatic crustacean Order Anostraca and include the Conservancy fairy shrimp (*Branchinecta conservatio*), longhorn fairy shrimp (*B. longiantenna*), vernal pool fairy shrimp (*B. lynchi*), San Diego fairy shrimp (*B. sandiegoensis*), and Riverside fairy shrimp (*Streptocephalus woottoni*). The vernal pool tadpole shrimp (*Lepidurus packardi*) is in the aquatic crustacean Order Nostraca (USFWS 1993, 1994, and 1997). All LVPB are short lived (< 150 days) and fast reproducers (20 to 60 days) and can complete their life cycle in 20 days under optimal conditions to 40 days under less favorable conditions, depending on the species. During the dry season, LVPB embryos are contained in a protective, impenetrable shell called a cyst. Cysts may remain viable in the soil for 15 years and often for much longer. Following winter/spring rains and the inundation of vernal pools, embryos hatch from the cysts and enter the water column to mature and reproduce and complete their life cycle (Eriksen and Belk 1999).

LVPB are endemic to vernal pools in the Central Valley, northern and southern Coast Ranges, southwestern coastal California, extreme northwestern Baja California, and a limited number of sites in the Transverse Range and Santa Rosa Plateau of California (USFWS 1993, 1994, and 1997; Eriksen and Belk 1999). Vernal pools are defined by Zedler and Keely (1998) as "precipitation-filled seasonal wetlands inundated during periods when temperature is sufficient for plant growth, followed by a brief waterlogged-terrestrial stage and culminating in extreme desiccating soil conditions of extended duration." Many LVPB are also found in sandstone or basalt-flow depression basins to small swale and earth slump, with a grassy or, occasionally, muddy bottom in grassland (Eriksen and Belk 1999). Depressions in the vicinity of the Alberhill 115-kV project alignment were evaluated to determine habitat suitability for the three LVPB as discussed below.

San Diego Fairy Shrimp – The San Diego fairy shrimp (SDFS) is listed as federally endangered by the U.S. Fish and Wildlife Service (USFWS) and has been observed in a variety of vernal pools from December to early May on mesas in San Diego and Orange counties (USFWS 1997). It prefers pools with moderate pH and low dissolved solids and alkalinity. Vernal pools occupied by the SDFS are usually small, shallow (usually less than 30 cm deep), unpredictable, and seasonally astatic puddles and pools. SDFS mature within 10 to 20 days and can survive for up to 3 weeks (maximum of 42 days) (Eriksen and Belk 1999). Because of the astatic conditions of vernal pools in southern California, only a limited number of SDFS cysts (0 to 30 percent) respond to the first wetting of the soil (Simovich and Hathway 1997).

Vernal Pool Fairy Shrimp – Vernal pool fairy shrimp (VPFS), listed as federally threatened by the USFWS, have been observed in a variety of vernal pools from December to early May in the Central Valley of California, and to the central and southern Coast Ranges from Solano County to Ventura County, California (USFWS 1994). They are also found in disjunct populations in the South Coast Mountains Region in a wide variety of habitats. Habitats include sandstone outcrops in Contra Costa and Santa Barbara counties; but the more typical habitat is small swales, earth slumps, or basalt-flow depression basins with a grassy or muddy bottom (Eriksen and Belk 1999). Vernal pool fairy shrimp inhabit vernal pools that vary in size from 0.56 m^2 (1.84 ft^2) to over 10 ha (24.71 acres), have low to moderate total dissolved solids (TDS) and alkalinity, neutral pH, contain cool water (4.5 to 23^oC), are less predictable and short-lived and experience a period of desiccation, typically during the summer through fall. Vernal pool fairy shrimp occur in a number of wetland types, including alkaline pools, road ruts, stock ponds, and various vernal pools and lakes. Vernal pool fairy shrimp mature rapidly and can reach reproductive age in 18 days under optimal conditions; however, 41 days is more common. Vernal pool fairy shrimp are one of the shortest lived fairy shrimp, with a maximum lifespan of 139 days (mean = 90 days) (Eriksen and Belk 1999).

Riverside Fairy Shrimp – The Riverside fairy shrimp (RFS) is listed as federally endangered by the USFWS and occurs in large, long-lived vernal pools in Orange, San Diego, and Riverside counties (USFWS 1993). It has the most restricted range of any fairy shrimp, occurring on coastal terraces just south of the California-Mexico international border up to Orange County and in select areas within Riverside County within grassland, chaparral, and coastal sage scrub habitats. It prefers warm-watered pools with low to moderate dissolved solids. Vernal pools occupied by the RFS are usually seasonally astatic and are inundated in a less predictable manner. Typically, these vernal pools are warm-watered, have a mean inundation of greater than 30 cm, and have been observed from December to June. RFS mature within 48 to 56 days and can survive for 120 days (maximum of 150 days) (Eriksen and Belk 1999). Because of the astatic conditions of vernal pools in southern California, cysts of the RFS may not respond to the first, second, or third wetting of the soil. They may also have the lowest cyst germination rate for anostracans. Even after the third wetting, only 2.8 percent germinated under laboratory conditions (Simovich and Hathway 1997).

METHODS

On February 16, 2012, AECOM biologist Chris Powers conducted a site visit to assess potential fairy shrimp habitat previously identified by E Read & Associates, Inc. following USFWS protocol guidelines for listed vernal pool branchiopods (USFWS 1996). Mr. Powers is authorized under USFWS permit TE-134337-0 to conduct protocol surveys for federally listed vernal pool branchiopods throughout all of California. Additional resources utilized to assess the site included a search of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) via the RAREFIND3 software, United States Geologic Survey (USGS) topographic maps, recent aerial photographs (Google Earth Pro), and the Soil Survey for Riverside County (USDA-NRCS online database).

It should be noted that the identification of potential fairy shrimp habitat was based on an analysis level only and does not include definitive surveys for the presence or absence of fairy shrimp. Such presence/absence surveys require notification to the USFWS and consist of intensive aquatic sampling of ponded areas during the rainy season, followed by soil sampling and analysis during the subsequent dry season, or another year of aquatic sampling within five years from initiation of the protocol.

SITE DESCRIPTION AND RESULTS

Depression 1 – The property is currently vacant and undeveloped land. At the time of the most recent habitat assessment, the entire property (including the area previously identified as potential

habitat [Depression 1] and the area identified as a potential Subtrans Yard [Alternative B – APN 370-050-020]) was almost completely devoid of vegetation and appeared to have been recently disked. The plant species observed in the vicinity of Depression 1 during the prior assessment (purple sand spurry and nonnative annual grasses), and the sparse number of species observed during the most recent habitat assessment are all non-native and not associated with vernal pool habitats. The alkali weed (*Cressa truxillensis*) observed during the prior assessment is a native, facultative wetland species. However, alkali weed is found in a variety of habitats (including upland areas, beaches, desert flats, and playas), and is not considered a vernal pool obligate species. Areas of inundation were observed along Mission Trail and the unimproved roadway to the south of the area of Depression 1 and were likely the result of the prior day's rain event. These areas appeared to be located within gravelly-substrate or on or adjacent to previously graded roadways and are not likely to hold standing water for an extended period of time. Soils underlying the property have been identified by the United States Department of Agriculture (USDA) - Natural Resource Conservation Service (NRCS) as Ramona very fine sandy loam with 0 to 2 percent slopes (USDA-NRCS online database). The Ramona complex soils are formed in alluvium derived mostly from granitic and related rock sources. Typically, the surface layer is sandy to fine sandy loam about 23 inches thick, underlain by sandy clay loam and fine sandy loam. According to the Hydric Soils List of California (February 2007), Ramona very fine sandy loam does not meet the criteria for hydric soils.

Depression 2 – The property is currently vacant and undeveloped and consists of moderately sloping north-northeast-facing hillside (toward the project alignment). At the time of the most recent habitat assessment, the majority of the property appeared to have been recently disked. Vegetation at the property was dominated by nonnative annual grasses, with a small number of native annuals present (fiddleneck [*Amsinckia intermedia*] and *Lupinus* sp.). Such species are also not associated with vernal pool habitats. The two tire ruts identified in prior assessments were observed, but water was not present. No other areas of ponding were observed at the property. Soils underlying the property have been identified by the USDA - NRCS as Wyman loam with 2 to 8 percent slopes and Porterville clay, with 0 to 8 percent slopes (USDA-NRCS online database). The Wyman series consists of deep, well drained soils that formed in alluvium from andesitic and basaltic rocks. Typically, the surface layer is silt loam about 5 inches thick, underlain by light clay to silty clay loam. Porterville series consists of deep, well drained soils that formed in fine-textured alluvial material from basic and metabasic igneous rock. Typically, the surface layer is reddish-brown clay about 27 inches thick, underlain by dark brown clay. According to the Hydric Soils List of California (February 2007), neither the Porterville nor the Wyman complex meet the criteria for hydric soils.

CONCLUSIONS

AECOM's findings discussed in this letter report are based upon professional experience; the agreed-upon scope of work as documented in AECOM's proposal dated January 30, 2012; accessibility to the data and information being collected; and the task-specific information available prior to AECOM's commencement of the work. The purpose of this letter report was to summarize the results of the habitat assessment and provide a determination as to whether a protocol survey is required due to potential impacts to the two previously identified depressions during construction activities. The field work completed in association with this letter report focused on the two previously identified pools and does not provide an evaluation of all potential habitat along the proposed alignment.

Based on the results of this habitat assessment, it is AECOM's opinion that fairy shrimp have a low likelihood to occur in the two depressions previously identified by E Read & Associates, Inc. or in any other areas of inundation/puddling observed. Also, construction activities associated with the Alberhill 115-kV project have a low likelihood to impact the areas because Depressions 1 and 2 are located on the opposite sides of asphalt-paved Mission Trail and Bundy Canyon Roads,

respectively. Construction activities associated with the proposed Subtrans Yard (Alternative B – APN 370-050-020) are also not likely to impact Depression 1 because the depression (and its associated micro-watershed) is located approximately 175 feet north of the northern boundary of the proposed Subtrans footprint and north of an unimproved/gravel road that is situated at a higher elevation from the watershed.

Therefore, based on the locations of Depressions 1 and 2 with respect to construction components (i.e., pole locations, construction staging areas, etc.) and the proposed Subtrans Yard, further analysis (i.e., dry season soil/cyst collection and genetic analysis) is not required. It is recommended that if additional pools are identified during the construction period, the pools should be evaluated for habitat suitability by a permitted biologist.

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United States Department of Agriculture (USDA) - Natural Resource Conservation Service (NRCS), online soils map and California Hydric Soils List (2007).

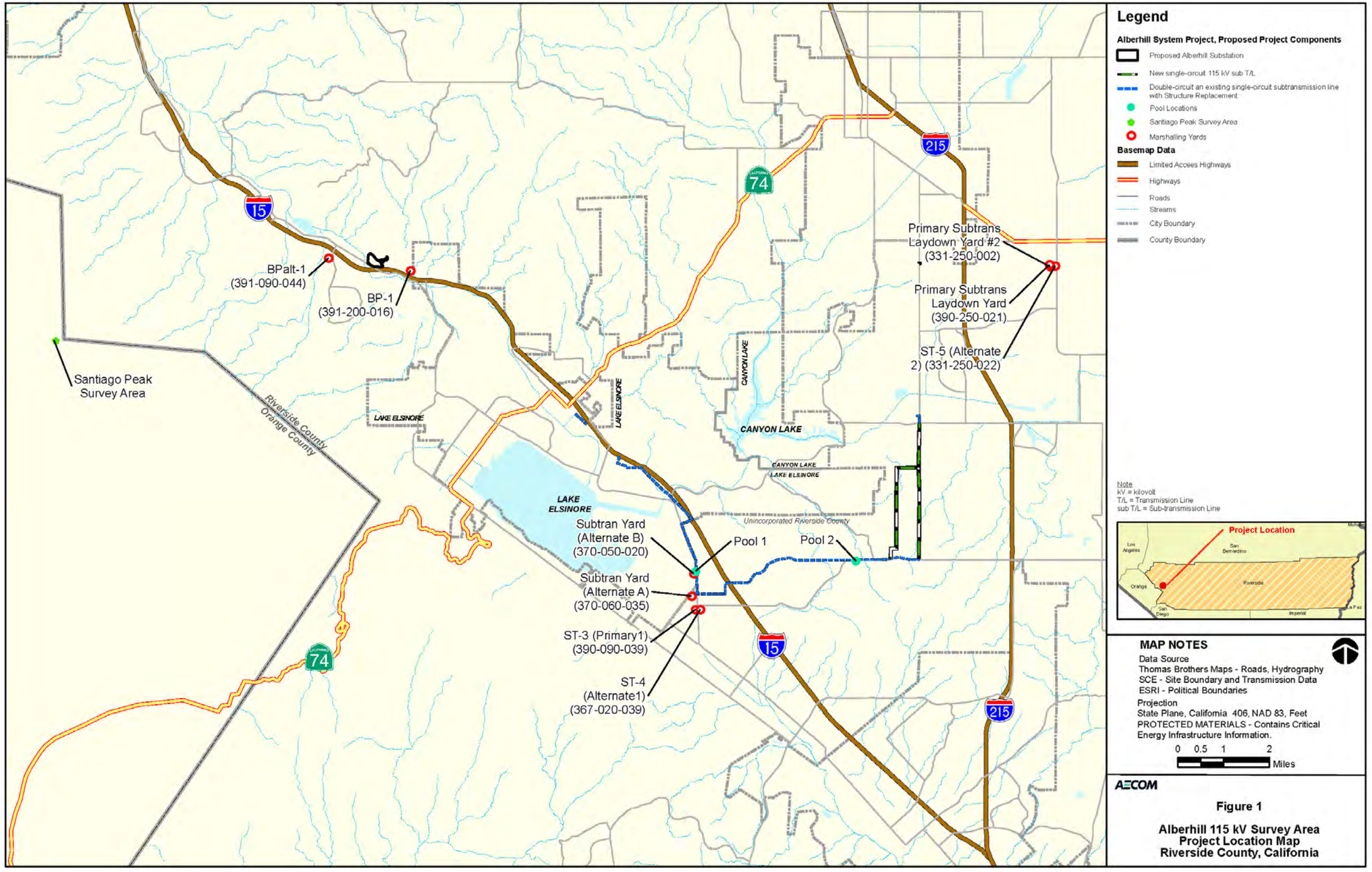
We appreciate the opportunity to be of service on this project. If you should have any questions regarding this letter report, or if we can be of further assistance, please contact either Chris Powers at 858.300.2707 or Matt Mallé at 909.579.3561.

Sincerely,

Christopher Powers	Matt Mallé
Biologist/Project Manager	Project Manager
TE-134337-0	

Attachments Figure 1 (Alberhill 115-kV Survey Area)
Site Photographs

Attachment 1:
Figure 1 (Alberhill 115-kV Survey Area)



Legend

Alberhill System Project, Proposed Project Components

- Proposed Alberhill Substation
- New single-circuit 115 kV sub T/L
- Double-circuit an existing single-circuit subtransmission line with Structure Replacement
- Pool Locations
- Santiago Peak Survey Area
- Marshalling Yards

Basemap Data

- Limited Access Highways
- Highways
- Roads
- Streams
- City Boundary
- County Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line

MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 0.5 1 2
Miles

AECOM

Figure 1

Alberhill 115 kV Survey Area
Project Location Map
Riverside County, California

Path: Z:\Projects\2012_surveys\Alberhill\Mxd\SI\Preliminary\pool locations 115kv area.mxd

Attachment 2:
Site Photographs

AECOM

PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
Alberhill 115-kV Project	Lake Elsinore, Riverside County, California	60212650 18.01

Photo No.	Date:
1	2/16/2012

Direction Photo Taken:

Northeast

Description:

Area of Depression 1. Property has recently been disked, with no evidence of ponding present.



Photo No.	Date:
2	2/16/2012

Direction Photo Taken:

North

Description:

View of areas of shallow ponding due to the prior day's rain event. No water was observed in the area of Depression 1, located at the left-hand side of the photograph.



AECOM

PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
Alberhill 115-kV Project	Lake Elsinore, Riverside County, California	60212650 18.01

Photo No.	Date:
3	2/16/2012

Direction Photo Taken:

East

Description:

Area of shallow ponding located along the unimproved road to the south of Depression 1.



Photo No.	Date:
4	2/16/2012

Direction Photo Taken:

South

Description:

View of the property proposed for the Subtrans Yard.



AECOM

PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
Alberhill 115-kV Project	Lake Elsinore, Riverside County, California	60212650 18.01

Photo No.	Date:
5	2/16/2012

Direction Photo Taken:

Northeast

Description:

View of the property proposed for the Subtrans Yard.



Photo No.	Date:
6	2/16/2012

Direction Photo Taken:

North

Description:

Areas of shallow ponding located along Mission Trail.



AECOM

PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
Alberhill 115-kV Project	Lake Elsinore, Riverside County, California	60212650 18.01

Photo No.	Date:
7	2/16/2012

Direction Photo Taken:

Southwest

Description:

View of the tire ruts identified as Depression 2.



Photo No.	Date:
8	2/16/2012

Direction Photo Taken:

East

Description:

View of the property along Bundy Canyon Road. Property has recently been disked, with no evidence of ponding present.



AECOM

PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
Alberhill 115-kV Project	Lake Elsinore, Riverside County, California	60212650 18.01

Photo No.	Date:
9	2/16/2012

Direction Photo Taken:

South

Description:

Upslope view of the property.



Photo No.	Date:
10	2/16/2012

Direction Photo Taken:

Northeast

Description:

View of the property towards the intersection of Bundy Canyon Road and Harvest Way East.



AECOM

PHOTOGRAPHIC LOG

Project Name:	Site Location:	Project No.
Alberhill 115-kV Project	Lake Elsinore, Riverside County, California	60212650 18.01

Photo No.	Date:
11	2/16/2012

Direction Photo Taken:

North

Description:

View of the property along Harvest Way East.



Photo No.	Date:
12	2/16/2012

Direction Photo Taken:

North

Description:

View of the tire ruts identified as Depression 2.



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SJM BIOLOGICAL CONSULTANTS

26 June 2012 SJMBC.864

Matthew Mallé
AECOM
901 Via Piemonte, 5th Floor
Ontario, CA 91764
909.579.3050

SUBJECT: Results of a May 2012 live-trapping survey for the federally endangered Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) in the part of the Southern California Edison (SCE) Alberhill System Project 500kV Transmission Line alignment that occurs within the Riverside County Habitat Conservation Association (RCHCA) Estelle Mountain - Lake Mathews Ecological Reserve, in Riverside County, California (Figure 1).

Dear Mr. Mallé:

At the request of AECOM, the above-described field study was conducted by SJM Biological Consultants between 19 and 27 May 2012. The purpose of this field effort was to re-confirm the absence of SKR in the parts of the overall project area lying within the Core Reserve lands.

INTRODUCTION AND SITE DESCRIPTION

The overall **Substation and 500kV project area** consists of lands in the immediate vicinity of Alberhill that are proposed for the construction of a substation and associated power lines. The proposed substation would be constructed in the lower (southwesterly) portion of the site, and the 500-kV transmission line (with alternative alignments) would be constructed to and from the Substation to the existing 500-kV transmission line in the Serrano Valley to the east/northeast.

This project area occurs immediately north of Interstate 15 (I-15), to the north and northwest of Lake Street in Riverside County, California. NAD 83, Zone 11 UTM coordinates near the center of the proposed substation are 461860E/3732899N, and coordinates near the center of the proposed potential transmission line alignments are 463259E/3733529N. The overall project area occurs in Sections 9, 10, 15 and 16, Range 5 West, Township 5 South, on the Alberhill USGS 7.5' Quadrangle, in Riverside County, California. Elevation in the overall project area ranges from approximately 1175-2000 feet above mean sea level.

Figure 1. Regional vicinity map for the trapping survey in RCHCA lands in the Alberhill 500kv transmission line



The current report and associated field live-trapping effort are only concerned with the part of the overall project area that encompasses the northerly rugged hills that constitute a portion of the Core Reserve lands (Reserve) administered by the RCHCA (1995). Two previous field studies (Montgomery 2011, 2010) included trapping surveys in this same general rugged area, and no SKR were captured during either trapping effort. However, those trapping surveys encompassed a variety of locations in the overall project area and, therefore, did not intensively focus on the lands within the Reserve. In contrast, the current trapping study focused entirely on the parts of the project lying within the Reserve and was designed to re-confirm the previously indicated absence of SKR in these lands.

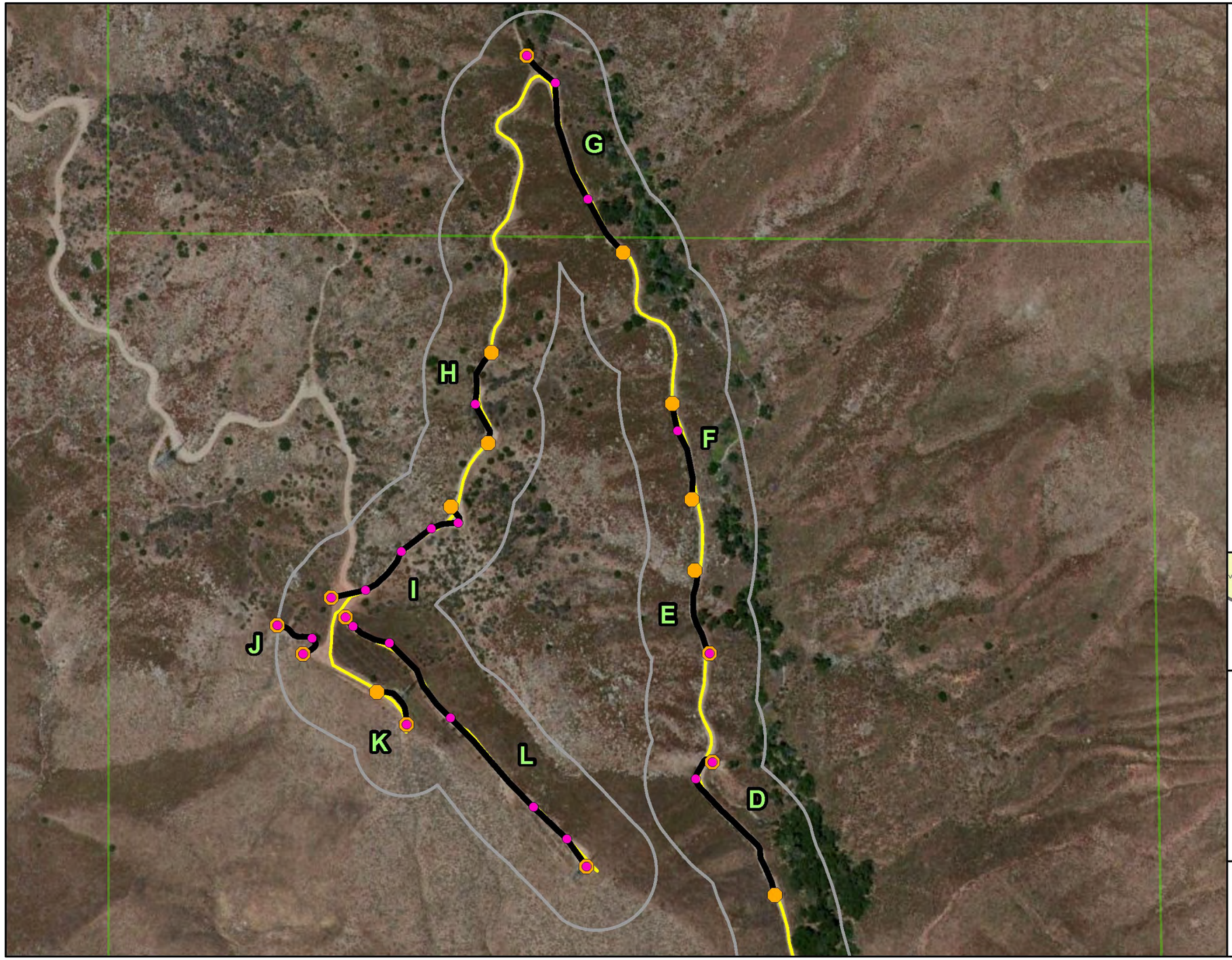
The study area encompasses steeply sloping rugged hills that are dominated by dense stands of disturbed annual grassland and moderate to dense stands of sage scrub. Such habitat conditions are generally unsuitable for SKR. Nonetheless, scattered small locations within this steeper terrain still exhibit level to gently sloping terrain with grassland and/or sparse sage scrub habitat that can be considered marginally suitable for SKR. Such gently sloping and level locations occur along certain sections of the dirt roads that define the basic study area (see Figures 2 and 3).

Soils in the study area vary considerably but are generally loams, which are fundamentally suitable for SKR. Nonetheless, the substrates in many locations in the study area are only marginally suitable for this species due to a strong component of coarse rocks. Specific soil types that dominate the study area include Cieneba rocky sandy loam and Temescal rocky loam (Knecht 1971).

Stands of Riversidean sage scrub vegetation are present throughout most of the study area. Common constituents of this community include brittlebush (*Encelia farinosa*), white sage (*Salvia apiana*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and, at scattered locations, tree-shrubs such as laurel sumac (*Malosma laurina*). Inter-shrub spaces are covered by sparse to moderately dense non-native grasses and both native and non-native forbs. Common forbs include mustard (*Hirschfeldia incana),* fiddleneck (*Amsinckia menziesii*), filaree (*Erodium botrys*), tarweed (*Hemizonia* sp), distant phacelia (*Phacelia distans*), London rocket (*Sisymbrium irio),* slender sunflower (*Helianthus gracilentus*), and deer weed (*Lotus scoparius).* Common grasses present throughout the site include: wild oats (*Avena sp*.), cheatgrass (*Bromus tectorum*), ripgut (*Bromus diandrus*), red brome (*Bromus madritensis rubens),* barley *(Hordeum murinum),* and fescue *(Vulpia* sp*).* Certain canyon bottoms and slopes in the study area exhibit individuals and clusters of coast live oak (*Quercus agrifolia*).

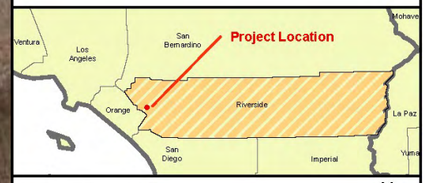
Stephens' kangaroo rat status, natural history and distribution

The SKR was listed as Endangered by the U.S. Fish and Wildlife Service (USFWS) in 1988, and as Threatened by the California Department of Fish and Game in (CDFG) 1971 (see USFWS 1997). This species is covered by the existing Riverside County Stephens' Kangaroo Rat Habitat Conservation Plan (RCHCA 1995), which was one of the first plans of this type to be developed in the United States.



Legend:

- RCA
- RCHCA
- Focus Area
- 50 Meter Buffer
- Trap Line
- Trap Line End Points
- Dulzura Kangaroo Rat Capture Location



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
NAD 83 Zone 11 North
Date: 06/11/2012

PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

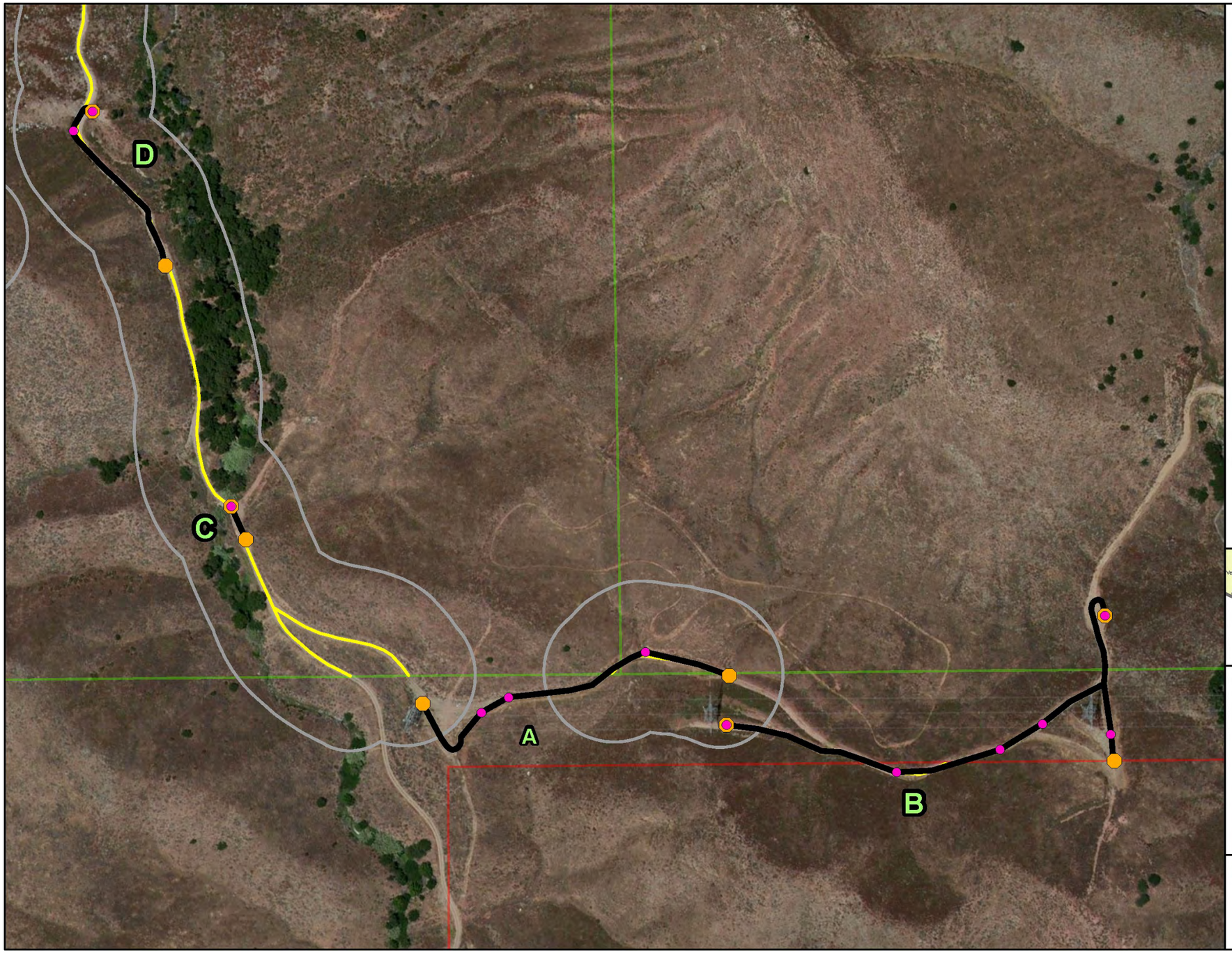
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Feet

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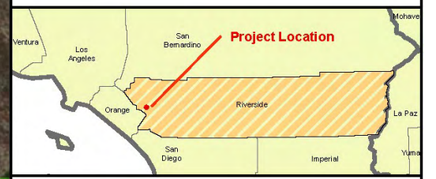
Figure 2

May 2012 Stephens' Kangaroo Rat Trapping Results
Alberhill System Project
Riverside County, California



Legend:

- RCA
- RCHCA
- Focus Area
- 50 Meter Buffer
- Trap Line
- Trap Line End Points
- Dulzura Kangaroo Rat Capture Location



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
NAD 83 Zone 11 North
Date: 06/11/2012

PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

N

0 75 150 300 450
Feet

AECOM

Figure 3

May 2012 Stephens' Kangaroo Rat Trapping Results
Alberhill System Project
Riverside County, California

This kangaroo rat is known to occur widely in Riverside County, in a few locations in southwestern San Bernardino County, and at several locations in San Diego County (Lackey 1967; Montgomery 1991; Montgomery et al. 1996/1997; O'Farrell and Uptain 1989; O'Farrell et al. 1986; O'Farrell 1987; Ogden 1998; SJM Biological Consultants 2003; Thomas 1975, 1973; USFWS 1997). SKRs are known to occur in the vicinity of the project site; in particular, they were confirmed as residents of two locations near the proposed substation proposed for the lower (southern) part of the overall 500kv project area (Montgomery 2011, 2010). The potential presence of this endangered species in the Reserve (study area) necessitated a determination of SKR presence/absence on the property.

California Department of Fish and Game June 2012 CNDDB records show various SKR capture locations in the general region of the study area. Although some of these records are old and represent observations of sites that are now developed or otherwise non-habitat for SKR, they do reveal that the species occurred in the general proximity to the study area and may, therefore, occur in remaining locations that exhibit relatively undisturbed patches of grassland and sparse sage scrub habitat on level to gently sloping terrain. Nonetheless, the two records of SKR nearest to the study area occur on higher ground to the east and northwest, on lands that are generally level to gently sloping and not within the rugged canyons and steep slopes traversed by the current study area.

General natural history features and habitat requirements of SKR are fairly well known (O'Farrell 1987, 1990). Habitats occupied by SKR characteristically occur on level to gently sloping terrain, although the species has occasionally been found on relatively steep slopes (e.g., Montgomery 1990; M.J. O'Farrell, pers. comm.). Soils in habitats harboring SKR are typically loamy in nature, while soils dominated by clay or sand very rarely contain this species (Price and Endo 1989; S.J. Montgomery, pers. observ.; M.J. O'Farrell 1987; O'Farrell and Uptain 1989).

SKRs typically occupy lands described as disturbed annual grassland and characterized by a relatively sparse cover of both shrubs and herbaceous vegetation. Although resident SKR have occasionally been found in relatively dense stands of sage scrub in Riverside County (S.J. Montgomery, pers. observ.), such occurrences are by far the exception to the rule. Occupied habitats commonly exhibit an abundance of bare soil during much of the year. Nonetheless, spring/early-summer flushes of forb (e.g., *Erodium* sp.) growth often temporarily reduce the amount of visible exposed ground. This phase of the yearly cycle of vegetation growth is subsequently transformed by the desiccating forces of the summer season, which cause non-grass herbaceous vegetation (e.g., forbs) to dry up and disarticulate, again revealing the bare ground that is so characteristic of occupied SKR habitat. Reflecting this preference for open ground, a high ratio of forbs to grasses increases the suitability of any grassland for SKR.

SKRs are capable of occupying small patches of favorable habitat amidst otherwise unsuitable (e.g., dense grassy) habitats. They also readily use narrow strips of open habitat to move between larger blocks of suitable habitat (S. Montgomery, pers. observ; O'Farrell 1990; Price and Kelly 1992).

METHODS

The study area was assessed for conditions potentially suitable for SKR, using the habitat preferences described above. Areas exhibiting conditions that appeared to be at least potentially suitable for SKR were then trapped to confirm species absence. The only locations in the study area that exhibited habitat conditions potentially suitable for SKR were the more level stretches of the dirt roads of the study area, and a single location immediately adjacent to this road. A total of 12 lines of 12-inch collapsible Sherman live traps were established along these more level road stretches, baited with bird seed during the late afternoon, checked near midnight, and then checked again and closed each following morning. Traps were set in the locations exhibiting the highest potential to harbor SKR. A total of 204 traps, distributed among 12 trap lines in groups of 10-22 traps, was set each of five consecutive nights between 22 and 27 May 2012.

All trapping was conducted by Daniel J. Grout, a sub-permittee to Stephen J. Montgomery, who holds a USFWS Permit (TE745541-10) and a CDFG Memorandum of Understanding (MOU) authorizing trapping and handling of SKR.

RESULTS AND DISCUSSION

Typical weather conditions during the field surveys in both project areas included clear skies on all survey days except 26 June, warm air temperatures (~60-82F) F) and wind speeds of 5-10 mph.

No SKRs were captured at any of the 12 trapping locations in the study area.

A total of 140 captures of the non-sensitive Dulzura kangaroo rat (*Dipodomys simulans*) (DKR) was recorded during the 5 nights of trapping (Table 1; Figures 2 and 3). All trap lines yielded DKR. These results were expected for reasons discussed above, including the generally steep nature of the topography, the density of shrubs and herbaceous vegetation cover, and the separation of the study area and known occupied habitats by steep rugged terrain that is unsuitable for SKR.

Also captured in the various trap lines were the San Diego pocket mouse (*Chaetodipus fallax*), deer mouse (*Peromyscus maniculatus*), cactus mouse (*Peromyscus eremicus*), and western harvest mouse (*Reithrodontomys megalotis*) (Table 1). A total of 262 captures was recorded among the four trapped species during the 5-night trapping effort, representing an overall trap success (no. captures/total traps set) of approximately 26%. This is a fairly high capture rate and indicates that small mammals, kangaroo rats in particular, were generally quite trappable during the field effort.

Although the current study area occurs within the Estelle Mountain – Lake Mathews Ecological Reserve, which is one of several Core Reserves for SKR in Riverside County, this kangaroo rat is not expected to inhabit the rugged terrain traversed by the proposed transmission line corridor. It also is highly unlikely that SKR would colonize the study area in the future, unless some repeating catastrophic event (e.g., a hot fire) converted the scrub habitats that presently dominant the area into open grasslands over time. Furthermore, a burn in the current study area would have

to intersect with known occupied SKR habitat in the immediate vicinity, thereby providing a clear "corridor" of suitable grassland habitat from occupied habitats into the newly opened grassland habitats in the study area. Even in the event of a short- or long-term habitat conversion, the steep rocky terrain that characterizes the study area would still impede movement of SKR into this generally sub-optimal part of the proposed 500kV project area.

CONCLUSIONS

The lack of any captures of SKR during the current protocol trapping survey indicate that this endangered species is absent in the study area. This was expected, as discussed in the report above, due to the rugged nature of the terrain and generally sub-optimal condition of the habitats throughout the study area. These results indicate that no impacts to SKR should occur from the proposed project within or immediately adjacent to the Reserve lands (the study area). It is unlikely that SKR would colonize the study area in the future, for reasons discussed above.

Please contact me if you have any questions regarding this report or the associated field effort.

Sincerely,



Stephen J. Montgomery

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Office (928) 527-1604
FAX (928) 527-1632
cell (858) 232-9602
email - steve@sjmbio.com

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Table 1. Results of a trapping survey for SKR in the sections of the proposed Alberhill SCE 500kv transmission line that lie within the RCHCA Estelle Mountain - Lake Mathews Ecological Reserve.

Line	# Traps	Date traps checked (May 2012)	Animals Captured*					Weather conditions taken at ~7pm each evening of the trapping survey - these data apply to all trap lines
			DISI (DKR)	PEMA	CHFA	PEER	WEHM	
A	20	23	2 (AF, AM)	1	2			sunny, clear, warm (76F), 5-10mph, new moon
	20	24	1 (AM)	2	1			sunny, clear, very warm (82F), 10-15mph, new moon
	20	25	2 (AF, SM)	1				mostly sunny, clear, warm (74F),10mph, new moon
	20	26	1 (AF)	1	1			sunny, mostly clear, cool (65F), 5-10mph, new moon
	20	27	1 (SF)		2			sunny, clear, mild (70F), 5-10mph, new moon
B	20	23	10 (6AF, 4AM)		1			
	20	24	9 (3AF, 3AM, SF, 2SM)	1	2			
	20	25	7 (2AF, 3SM, 3AM)		1			
	20	26	8 (3AF, 4AM, SM)	2				
	20	27	6 (2AF, 3AM, SM)		1			
C	10	23		1				
	10	24	1 (AM)		1			
	10	25		1				
	10	26	1 (AM)					
	10	27		1				
D	22	23			2			
	22	24	1 (SF)	1	1			
	22	25			2			
	22	26	1 (SF)		1			
	22	27		1				
E	20	23	1 (SM)				1	
	20	24			1			
	20	25	1 (SM)	1			1	
	20	26	1 (AM)				1	
	20	27		1				
F	20	23			2			
	20	24	1 (AF)		3			
	20	25			2			

	20	26		1	1		
	20	27	1 (AM)		2		
G	15	23	3 (AM, 2AF)				1
	15	24	2 (AF, AM)	1	1		
	15	25	3 (2AM, AF)				
	15	26	2 (AF, AM)		1		
	15	27	1 (AF)				1
H	10	23					
	10	24					
	10	25	1 (SM)	1			
	10	26	1 (SM)				
	10	27		1			
I	15	23	5 (SF, AM, 2SM, AF)		3		
	15	24	4 (2AM, AF, SM)	1	2		
	15	25	5 (2AF, AM, 2SM)		1		
	15	26	3 (2AM, AF)	1	2		
	15	27	3 (AM, 2AF)		2		
J	12	23	3 (AM, 2AF)		2	1	
	12	24	3 (2AM, AF)		1		
	12	25	2 (AF, AM)			1	
	12	26	3 (AM, 2AF)			1	
	12	27	1 (AM)	1	1		
K	10	23	1 (AM)		4		
	10	24			3		
	10	25	1 (AM)	1	1		
	10	26			3		
	10	27	1 (SM)		2		
L	30	23	7 (2AF, 3SM, 3AM)	1	8	1	
	30	24	6 (2AF, 3AM, SM)	1	5		
	30	25	5 (2AF, AM, 2SM)		4	2	
	30	26	7 (2AF, 3SM, 3AM)		5	1	
	30	27	6 (2AF, 3AM, SM)	1	3	1	
TOTALS (12 trap lines)	**1020 trap-nights**	**5 trap-nights, all lines**	**140 DKR captures**	**26**	**83**	**8**	**5**

Animals Captured*

DISI	Dulzura kangaroo rat (*Dipodomys simulans*)
CHFA	San Diego pocket mouse (*Chaetodipus fallax fallax*)
PEMA	Deer mouse (*Peromyscus maniculatus*)
WEHM	Western Harvest mouse (*Reithrodontomys megalotis*)
PEER	Cactus Mouse (*Peromyscus eremicu*s)
AM	Adult Male
AF	Adult Female
SM	Sub-adult Male
SF	Sub-adult Female

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Draft Alberhill System Project, Least Bell's Vireo and Southwestern Willow Flycatcher Survey Report

August 2012

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1.0 INTRODUCTION

This report summarizes the results of a focused survey completed by AECOM for the Alberhill System Project (Project), in Riverside County, California. The surveys were conducted for two federally and state listed riparian bird species known to breed in the southern California region, the least Bell's vireo (*Vireo bellii pusillus*) (LBV) and the southwestern willow flycatcher (*Empidonax traillii extimus*) (SWF). The surveys for both species were performed concurrently and were completed between April 12 and July 23, 2012. The surveys were performed to satisfy requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), under which LBV and SWF are considered covered species. The surveys followed protocol established for these species by the U.S. Fish and Wildlife Service (USFWS). This was the third consecutive year that a focused LBV/SWF survey was conducted by AECOM for the Project.

1.1 Project Description

Southern California Edison Company (SCE) proposes to construct the Project to serve current and projected demand for electricity and maintain electric system reliability in southwestern Riverside County (Figure 1). The Project is located in the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar, as well as the surrounding unincorporated areas.

The Project Area (or Survey Area) is defined as the area analyzed for the following Project components: the proposed Alberhill Substation, the proposed 500-kiloVolt (kV) transmission lines (T/L), the proposed 115-kV Subtransmission (Sub) T/L, and the alternative 115-kV Sub T/L (Figures 2 and 3).

- The proposed Alberhill Substation would be an unstaffed, automated 1,120-Mega Volt Ampere (MVA) 500/115-kV substation with an ultimate build-out of 1,680 MVA. Based on the preliminary design, approximately 8,000 cubic yards of soil, vegetation, and rock would be removed from the site (area of anticipated direct impact). In addition, approximately 10,320 cubic yards of soil would be removed as a result of excavation for foundation and building footings. Demolition of the existing horse ranch and relocation of a 30-inch gravity agricultural water line (owned and operated by Elsinore Valley Municipal Water District) would be required prior to mass grading. The horse ranch and adjacent undeveloped areas compose the Alberhill Substation survey area.

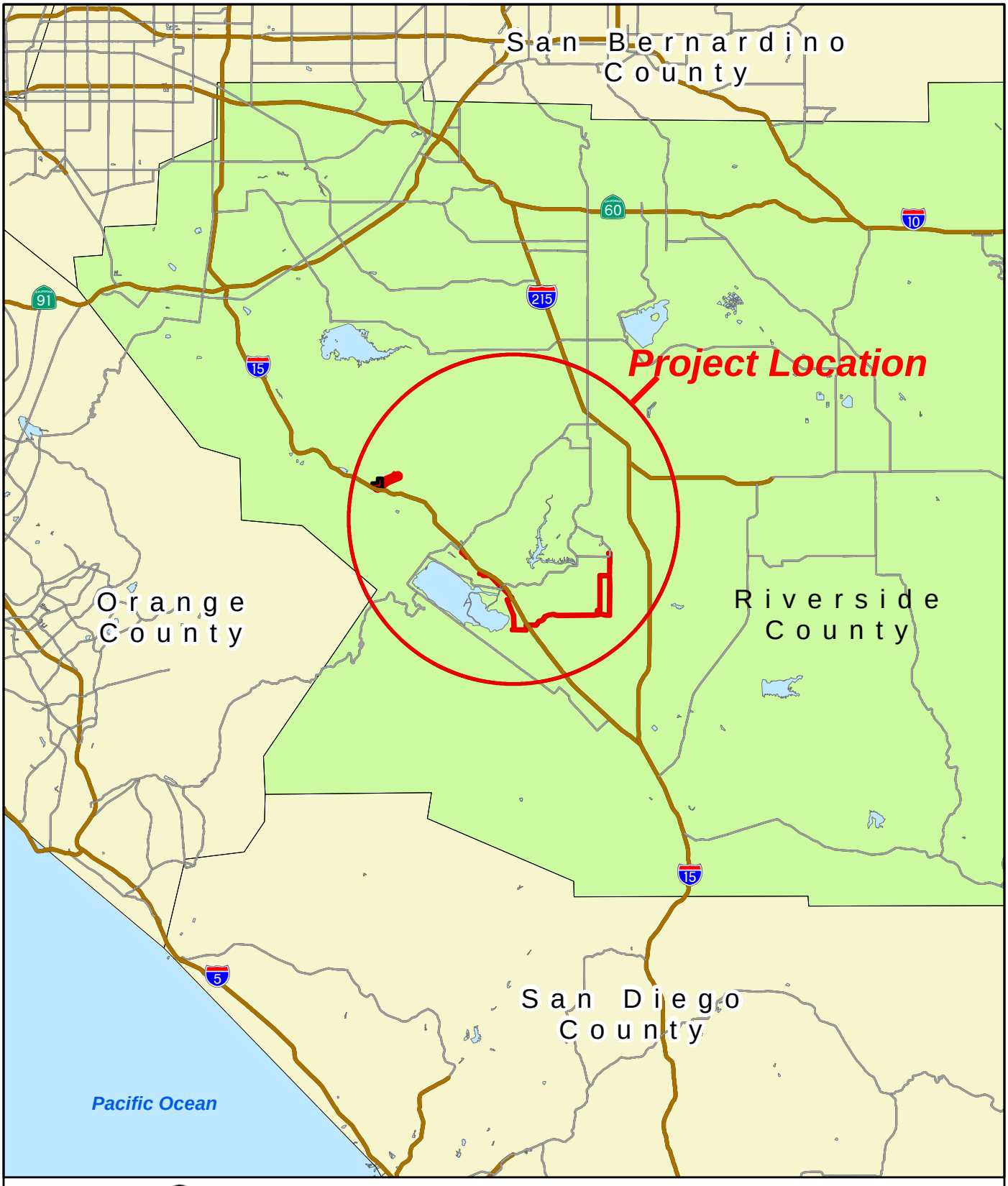
- The proposed 500-kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the 500-kV T/L include the following: the proposed N3 500-kV transmission line (N3 survey area [to the Alberhill Substation]), the proposed C1 500-kV transmission line (C1 survey area [from the Alberhill Substation]), and the existing Serrano-Valley 500-kV T/L (Existing 500-kV T/L alignment). Collectively, all three of these areas, as well as the proposed pull and tensioning locations, are referred to as the 500-kV T/L survey area. The 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the proposed and existing 500-kV T/L) around each of the 500-kV T/L project components.

- The alternative 500-kV T/L would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L. The components of the alternative 500-kV T/L include the following: the alternative SA 500-kV transmission line (SA survey area [to the Alberhill Substation]) and the alternative VA 500-kV transmission line (VA survey area [from the Alberhill Substation]). Both of these survey areas, as well as the alternative pull and tensioning locations, are referred to as the alternative 500-kV T/L survey area. The alternative 500-kV T/L survey area encompasses a 700-foot wide corridor (350 feet on either side of the alternative and existing 500-kV T/L) around each of the 500-kV T/L project components.

- The proposed 115-kV Sub T/L would consist of a new 115-kV Sub T/L and modification of the existing 115-kV Sub T/L. The 115-kV Sub T/L would transfer electrical service of five existing 115/12-kV substations (Ivyglen, Fogarty, Elsinore, Skylark, and Newcomb substations) to the new 500/115-kV Alberhill Substation. A Western Riverside County Narrow Endemic Plant Survey Area

(NEPSA) identified along the 115-kV Sub T/L composes the 115-kV Sub T/L survey area. The area analyzed for the 115-kV Sub T/L survey area encompasses a 400-foot wide corridor (200 feet on either side of the 115-kV Sub T/L) around the 115-kV Sub T/L project components.

- An alternative to the proposed 115-kV Sub T/L has also been analyzed (alternative 115-kV Sub T/L). This alternative consists of an optional routing of the eastern portion of the proposed 115-kV Sub T/L.



MAP NOTES

Data Source
ESRI - Roads, Hydrography
SCE - Site Boundary and Transmission Data
Projection
State Plane, California 406, NAD 83, Feet
Date: 8/5/2011
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 2.5 5 10 Miles

Project Data

Alberhill System Project

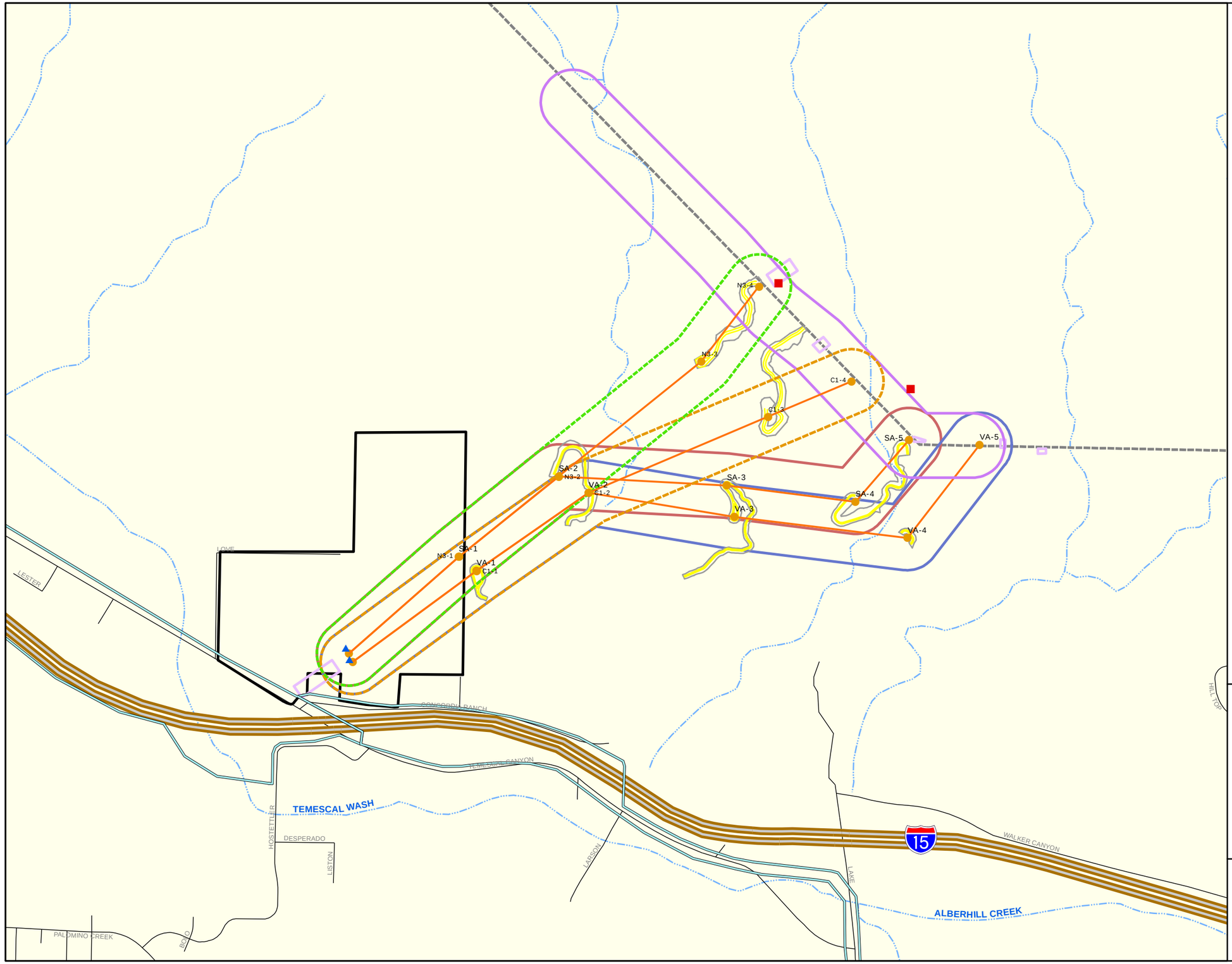
Basemap Data

Freeways
Major Roads
County Lines
Western Riverside County Multiple Species Habitat Conservation Plan Area

Figure 1

Regional Location

Path: C:\Projects\2011 surveys\Alberhill\ArcGIS\Final\Wetlands\Figure1.mxd



Legend:

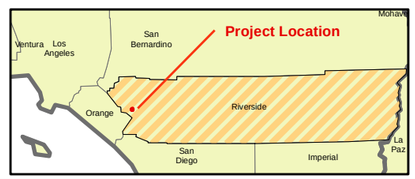
Alberhill System Project,
Proposed Project Components

- Substation Survey Area
- C1 500 kV T/L Survey Area
- N3 500 kV T/L Survey Area
- Existing Serrano-Valley 500 kV T/L Survey Area
- SA 500 kV T/L Survey Area
- VA 500 kV T/L Survey Area
- Pulling Point Disturbance Area
- Access Road
- Access Road Disturbance Area
- Proposed 500 kV T/L
- Existing Serrano-Valley 500 kV T/L
- 115 kV T/L
- N3-1 Tower Location
- Pulling Point
- Tensioning Point

Basemap

- Major Freeways
- Roads
- Streams

Note
kV = kilovolt
VA = Alternative 500kV VA Transmission Line
SA = Alternative 500kV SA Transmission Line
C1 = Proposed 500kV C1 Transmission Line
N3 = Proposed 500kV N3 Transmission Line
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
Date: 8/5/2011

PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

1,000 500 0 1,000 Feet

AECOM

Figure 2

Alberhill Substation & 500 kV Survey Area Project Location Map Riverside County, CA

F-882

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LAKE ELSINORE
LAKE ELSINORE
CANYON LAKE
LAKE ELSINORE
CANYON LAKE
CANYON LAKE
CANYON LAKE
LAKE ELSINORE
LAKE ELSINORE
Unincorporated Riverside County
LAKE ELSINORE
15
MURRIETA

Legend

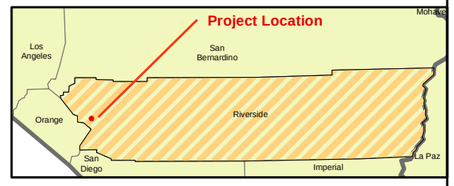
Alberhill System Project, Proposed Project Components

- Proposed 115 kV sub T/L Survey Area
- Alternative 115 kV sub T/L Survey Area
- New single-circuit 115 kV sub T/L
- Double-circuit 115 kV sub T/L (existing single-circuit sub T/L with structure replacement)

Basemap Data

- Freeways/Highways
- Roads
- Streams
- City Boundary

Note
kV = kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line



MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

0 0.25 0.5 1 Miles

AECOM

Figure 3

Alberhill 115 kV Survey Area Project Location Map Riverside County, California

F-883

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The surveys investigated all areas with potentially suitable habitat for LBV and SWF that are anticipated to be directly or indirectly impacted by the proposed Project. The survey areas included a biological buffer area of at least 200 feet around the Project's direct limits of disturbance. The elevation of the various survey areas investigated ranged from a low of 1,180 feet to a high of 1,772 feet above mean sea level. Figures 2 and 3 and Appendix B, Figures B-1 through B-10, show, respectively, the Project's regional location and specific LBV and SWF survey locations.

1.2 Species Accounts

Least Bell's Vireo

The least Bell's vireo is one of four subspecies of Bell's vireo, a small, insectivorous, migratory songbird. The breeding range of LBV is currently restricted to southwestern California and northwestern Baja California, although it historically bred extensively into the Central Valley of California (USFWS 1998). It is thought to winter primarily in southern Baja California. Loss and degradation of breeding habitat and brood parasitism by the brown-headed cowbird (*Molothrus ater*) are considered major factors resulting in the decline of the LBV population in California. Habitat conversion for agricultural and development have removed much of the riparian woodlands required for nesting by LBV and other riparian-dependent birds. Flood control measures and channelization have also depleted important habitat for riparian species. Grazing by cattle has impacted habitat suitability by removing or thinning the understory vegetation required by many riparian nesting birds, including LBV. Additionally, the presence of livestock generally leads to increased cowbird populations and, in turn, increased pressure from brood parasitism in local songbird populations.

The significant reduction in the population size and range of LBV resulted in its listing by the California Department of Fish and Game (CDFG) as endangered in June 1980 and by the USFWS as endangered in May 1986. Since the early 1990s, however, many LBV populations have demonstrated fairly significant growth, especially those having received conservation and management efforts. Census data from 1986 indicated an estimated 300 pairs in southern California, but by 2000 the estimate had risen to a total of 2,000 pairs (USFWS 2001). More recent data show California's statewide population was estimated to be approximately 3,000 territorial males in 2008 (Kus et al. 2010). Extensive cowbird trapping and habitat restoration are presumed to be the primary factors contributing to this recent recovery trend. LBV has been reoccupying large portions of its former range in southern California, as it has slowly expanded north. In 2005 a pair of LBV successfully bred in the San Joaquin Valley, which was the first such occurrence in this part of its former range in over 50 years (PRBO 2009).

The LBV prefers riparian habitat with a dense understory of young willows (*Salix* spp.), mulefat (*Baccharis salicifolia*), Mexican elderberry (*Sambucus mexicana*), California rose (*Rosa californica*), mugwort (*Artemisia douglasiana*), poison oak (*Toxicodendron diversilobum*), desert wild grape (*Vitis girdiana*), and a variety of other shrub and groundcover species (Kus 2002; Kus et al. 2010). The LBV is generally found in riparian areas that are dominated by one or more willow species, especially where a mixed-age composition occurs. These areas frequently include other trees such as cottonwood (*Populus* spp.) or California sycamore (*Platanus racemosa*), particularly where the canopy is within or immediately adjacent to an understory layer of vegetation (Salata 1983). One analysis indicated that LBV prefers stratified vegetation, with low amounts of aquatic and herbaceous cover (RECON 1990). Another ecological variable is the width of the willow riparian woodland. LBVs exhibit a clear preference for relatively broad woodlands, which typically exhibit more stratification of vegetation. It was noted that an increase in occupied habitat occurs as the width of the willow riparian woodland exceeds 50 meters wide versus 10 meters or less (RECON 1990). As local populations continue to expand, however, and occupy the remaining areas of more typical habitat, a higher incidence of LBV using lower quality or "marginal" habitats becomes apparent.

The core of the LBV range in southern California has been in San Diego County, especially while populations were at their lowest known levels during the 1980s. Although this county continues to support several significant populations, another substantial population has been in the Prado Basin area in western

Riverside County (approximately 25 miles northwest of Lake Elsinore). In the greater Prado Basin area, a total of 538 LBV territories were recorded in 2009 (pers. comm., Jim Pike). The Santa Ana River upstream and downstream of Prado Basin has also been known to support increasing numbers of LBV in recent years. Although many local populations have apparently leveled off in recent years (such as in San Diego County and Prado Basin), this may be a result of areas with suitable habitat reaching saturation levels of LBV (pers. comm., Jim Pike).

Southwestern Willow Flycatcher

The southwestern willow flycatcher is a small, olive-colored, migratory songbird. One of four commonly recognized subspecies of the willow flycatcher, the SWF was listed as a federally endangered species by the USFWS in March 1995. In addition, all willow flycatcher subspecies that nest in California (including SWF and two other subspecies in northern California) are considered state endangered by CDFG. The breeding range of SWF includes southern California, Arizona, New Mexico, southwestern Colorado, extreme southern portions of Nevada and Utah, and (possibly) western Texas (Sogge et al. 1997). As with other willow flycatcher subspecies, its winter range occurs south of the United States. Throughout its range, the SWF is one of the latest migratory species to arrive on its breeding grounds (Garrett and Dunn 1981). In southern California, it is present from early to mid May, and remains until August to early September.

The identification of SWF in the field is quite difficult due to its close resemblance to other flycatcher species in the *Empidonax* genus. In addition, due to extreme similarity of appearance and vocalizations, it is not possible to positively identify the various willow flycatcher (WIFL) subspecies in the field. Populations of other subspecies of WIFL (e.g., *E.t. brewsteri* and *E.t. adastus*, which breed as far north as southwestern Canada) are apparently maintaining stable populations. They are widespread during migration and can be encountered at this time in SWF breeding habitat, as well as in a variety of other native and nonnative habitats (Garrett and Dunn 1981; Hamilton and Willick 1996). In fact, at the species level, the WIFL still occurs as fairly common migrant in southern California, although these birds are all assumed to belong to the more common, northwesterly-breeding subspecies. It is currently recognized, however, that the SWF subspecies is the only one known to breed in southern California. Consequently, SWF surveys extend through the breeding season to differentiate the SWF from other, purely migratory subspecies of willow flycatcher. The survey protocol's increased frequency of site visits between June 20 and July 17 is intended to increase the likelihood of detecting any SWF that may be present in a survey area, at a time when no other WIFL subspecies is expected to be present in southern California.

Breeding habitat for SWF is restricted to dense, well-developed riparian woodland, from sea level (e.g., in areas of California), to as high as approximately 8,000 feet (e.g., in Arizona). Typically this habitat occurs near surface water or saturated soil (Sogge et al. 1997). Sogge et al. (1997) suggest that nesting habitat for SWF typically includes patches at least two acres or greater in extent, with linear-shaped habitats at least 10 meters (33 feet) wide. Specific habitat characteristics, such as species composition and diversity, dominant vegetation, and vegetative structure, have been found to be quite varied. For many years, SWF breeding habitat in California was thought to be generally limited to willow-dominated riparian communities (Garrett and Dunn 1981; Grinnell and Miller 1944). In southern California, however, more recent work (e.g., Robert McKernan, Bill Haas) has revealed this species occasionally occupying habitats dominated by alders (*Alnus rhombifolia*), coast live oak (*Quercus agrifolia*), and other species. Along the lower Colorado River, salt cedar (*Tamarix ramosissima*) dominated habitats are known to support substantial numbers of SWF breeding territories (McKernan and Braden 1999).

Historically, the SWF was considered a common summer resident in appropriate habitat throughout the state of California (Grinnell and Miller 1944). In recent decades, however, this taxon experienced significant population declines. In 1997, the known breeding population was estimated at between 300 and 500 pairs, with only a small percentage of this total occurring in California (Sogge et al. 1997). More recently, a range-wide assessment of the SWF, conducted in 2007, estimated its population at 1,299 territories (USFWS 2011). During this time, however, the California population has shown no evidence of improvement, and in

general has declined. Similar to LBV, the SWF's decline throughout its range is widely attributed to habitat loss, habitat degradation, and brood parasitism by the brown-headed cowbird.

2.0 METHODS

The survey protocol for SWF and LBV followed guidelines provided for these species by the USFWS. For projects that may impact potential SWF habitat, SWF survey protocol, as revised in 2010, specifies a total of five site visits to areas of potential SWF habitat. These visits are to be conducted during three consecutive time periods, with successive surveys at any site at least five days apart. The three time periods identified for SWF surveys are as follows: Survey Period One: May 15 through 31; Survey Period Two: June 1 through 24; and Survey Period Three: June 25 through July 17. A minimum of one survey is to be conducted during Survey Period One, with a minimum of at least two surveys during Survey Periods Two and Three. Four of the site visits are conducted during the last two survey periods, as this is the best period to verify the summer resident status of SWF and eliminate the possibility of strictly transient (in southern California) subspecies of WIFL. As stated above, other subspecies of WIFL pass through the breeding range of SWF during spring and fall migration but do not breed in the region.

Guidelines adopted by the USFWS for LBV surveys specify 8 visits between April 10 and July 31, with a minimum of 10-day intervals between site visits. The protocol for LBV requires a maximum survey area per biologist per day of 3 linear kilometers (1.86 miles) or 50 hectares (123 acres). The combined acreages and linear distances of all LBV/SWF survey areas for the Project was considerably less than these maximum daily survey limitations specified by USFWS. Combining protocol survey guidelines for both the SWF and LBV necessitates a total of nine site visits, with the visits conducted between April 10 and July 31.

For the SWF, survey protocol requires that SWF song recordings be broadcast at regular intervals in areas of suitable habitat to optimize the potential for the detection of this species. Due to the potential for these recordings to adversely impact nesting activity and the difficulty in finding and identifying SWF, USFWS requires that the surveying biologist be in possession of a current endangered species [Section 10(a)(1)(A)] permit that authorizes survey activities for SWF. No endangered species permit is required to conduct surveys for LBV, and the use of song recordings is not required for this species. All surveys were performed by AECOM avian biologist Doug Willick, who is permitted to conduct presence/absence surveys for SWF and to conduct nest checks for LBV (permit #TE-821404-5).

Surveys were performed by slowly walking through, or along, all areas of suitable habitat for LBV and SWF and stopping and listening periodically to detect song and/or other vocalizations. Surveys were conducted primarily during morning hours and were restricted to the earlier morning hours for locations that were surveyed for SWF. The surveys avoided weather conditions (e.g., excessive wind, heat, rain, fog) that would not be conducive to the detection of LBV and SWF or small songbirds in general. Table 1, below, identifies the survey dates, time of day during which the survey was conducted, and the weather conditions during the survey.

During the performance of the LBV/SWF survey, attention was also given to other special status riparian birds that had potential to be present with the Project's survey areas. Based on habitat present in at least portions of the survey areas, other special status riparian birds with some potential to occur include yellow warbler (*Setophaga petechia*) and yellow-breasted chat (*Icteria virens*). These species are considered by California Department of Fish and Wildlife (CDFW) to be California Species of Special Concern. A compendium of all bird species recorded during this focused riparian bird survey is included at the end of this report (Appendix A).

Table 1. Survey Details and Conditions.

Date	Time of Day	Survey Conditions
4/12/2012	0745-1320	Clear at start, with low clouds beginning to move in through morning; 60% c.c. at end. Temps from 52° to high 60°s, with calm to mild s.w. winds (up to 3 mph).
4/27/2012	0730-1320	Partly cloudy (40% c.c.), mostly over mountains, high 60s, 0-2 mph wind at start. 10% c.c., high 70°s, and 1-2 mph wind at end.
5/14/2012	0745-1310	Clear, 0-2 mph wind, 65° at start of survey. Remained clear through survey, with a high of 87°. Variable winds throughout morning, with gusts to 10 mph at 1015 (3-6 mph s.w. winds at end).
5/25/2012	0735-1300	Mostly cloudy through morning, 50% c.c. at end of survey. Temps from 61° to 68° through survey. Winds of 3-9 mph s.w. at start, 4-8 mph at end.
6/5/2012	0730-1315	Partly cloudy (40-50% c.c.), 64°, 0-2 mph s.w. wind at start of survey. 25% c.c., 75°, and 3-7 mph wind at end.
6/22/2012	0715-1100	Overcast, mid 60°s, calm at start of survey. Clear by 1000 hrs. 80°, and moderate winds of 2-6 mph s.w. during late morning.
7/2/2012	0755-1200	Clear throughout survey; high 60°s, 0-2 mph wind at start of survey. 0-4 mph s.w. wind, 86° at end.
7/9/2012	0745-1145	Clear throughout survey; 73°, nearly calm at start. 98°, 2-4 mph s.w. winds at end.
7/23/2012	0730-1135	Clear, 72°, 0-4 mph s.w. wind at start of survey. Thunderheads developing to the east by 1100. High 80°s, 2-4 mph s.w. winds at end.
Abbreviations c.c = cloud cover mph = miles per hour All temperatures are in degrees Fahrenheit		

2.1 Habitat Assessment

When the focused LBV/SWF survey was initiated for the Project in 2010, AECOM avian biologist Doug Willick examined all areas within the 115 kV portion of the Project that had previously been mapped as riparian woodland or riparian scrub habitats. This initial habitat assessment was conducted in order to identify all areas of potentially suitable LBV/SWF breeding habitat within the Project area. The primary criteria used to evaluate the suitability of riparian related habitats are included in the paragraphs that follow. Those areas determined to have at least some suitability for these species were surveyed for LBV and SWF in 2010 and 2011. During 2011, however, the LBV/SWF survey areas were increased to include a small riparian patch within the proposed Alberhill Substation property, as well as a portion of Temescal Creek that lies within the biological buffer area adjacent to the Alberhill Substation.

For the 2012 survey season, a new area was added to the focused riparian bird survey sites, while three total sites were removed. These areas are discussed, along with descriptions of the other survey sites, in Section 3.1 (Description of Survey Sites), below.

2.1.1 Species Composition and Structure

Although both LBV and SWF are known to utilize a variety of riparian trees and shrubs in habitat occupied by breeding birds, certain species (e.g., willows and mulefat) are more commonly found in LBV and SWF breeding habitat. Conversely, some riparian habitats (native or nonnative) are less typically favored by nesting LBV and SWF, such as those dominated by white alder, California sycamore, or giant reed (*Arundo donax*). Both birds typically occupy habitat with a diverse structure that includes a variety of young to moderate-aged trees and a fairly dense, shrubby understory. SWF, in particular, typically prefer moister habitats, and will usually require riparian communities that contain surface water within or immediately adjacent to their territories. SWF habitat, therefore, will usually have a substantial marshy element and/or a variety of herbaceous wetland species in the understory, such as that associated with the Valley Freshwater Marsh plant community.

2.1.2 Habitat Condition

Habitat condition, or quality, can be an important factor in whether or not a particular area would provide potential nesting habitat for LBV or SWF. Cattle grazing, flooding, fires, or human disturbance, for example, can degrade or eliminate the understory component of a riparian area and substantially reduce its suitability for these species. These factors can also have indirect adverse effects, such as increasing the site's attractiveness to brown-headed cowbirds.

2.1.3 Minimum Habitat Size

The overall extent of potential LBV/SWF habitat that is available at a given site may limit its suitability as breeding habitat. Although much variation occurs in the size of breeding territories of LBV and SWF, minimum territory sizes for each species are generally at least 0.5 acre, and usually much larger (Sogge et al. 2010; Kus et al. 2010); therefore, patches of potentially suitable habitat smaller than 0.5 acre will likely be unsuitable as breeding habitat for these species.

2.1.4 Isolation of Habitat

The extent of potentially suitable habitat is especially important when an area is completely isolated by extensive areas of unsuitable habitat; therefore, the more a patch of potentially suitable habitat might be isolated, the more important it is that the habitat patch be of sufficient size to support one or more average-sized breeding territories.

3.0 SURVEY RESULTS

Based on the initial habitat assessment conducted in 2010 for the 115 kV segment of the Project's survey area, 11 sites were determined to have limited to moderate potential to support LBV and/or SWF. The addition of the 2 new survey areas located within and adjacent to the proposed Alberhill Substation site increased the number of LBV/SWF survey areas analyzed in 2011 to 13 sites In 2012, one new site was added, and three were removed (Appendix B). A description of each site, and its 2012 survey status, is provided in Section 3.1 (Description of Survey Sites), below.

In summary, approximately four of the sites surveyed in 2012 appeared to have moderate potential to support LBV breeding habitat, while the remaining seven sites were considered only marginally suitable for this species. For SWF, due to their strong preference for wetter riparian communities, only one site surveyed in 2012 (i.e., CWR2-1, Appendix B, Figures B1-B10) was considered to be marginally suitable as potential SWF breeding habitat. The remainder of the sites were not considered suitable breeding habitat for SWF. Characteristics of the individual sites that were surveyed this year are discussed in the following section.

3.1 Description of Survey Sites

The **Alberhill Substation** survey area supports a small patch of riparian habitat associated with a pond inside an equestrian track, which was part of the now abandoned horse ranch (Appendix B, Figure B-1). The low-lying area within the southeastern end of the track appears to regularly pond water, with a small amount of water still being present at the beginning of the survey period. In this same area are a few mature tree willows, mulefat, bulrush (*Scirpus* sp.), and a variety of nonnative trees such as saltcedar (*Tamarix* sp.), fan palm (*Washingtonia* sp.), and pines (*Pinus* sp.). Due to the very limited extent of the riparian habitat within the equestrian track, its isolation from any similar habitat, and the prevalence of nonnative trees, the habitat quality was considered marginal for such riparian-obligate birds as LBV, and unsuitable for SWF.

One new site was added to the areas surveyed in 2012. This was a **spring-fed patch of riparian habitat** that is located in an unnamed canyon approximately 0.3 miles east of the Alberhill Substation (Appendix B, Figure B-2). This isolated patch was slightly under 0.5 acre in size, and included at least three willow species, most being of moderate development, Mexican elderberry, and patches of mulefat. Most of the riparian habitat had a well-developed understory component, and in some cases transitioned very abruptly into Riversidean sage scrub vegetation. Although the habitat was undisturbed, its suitability for occupation by LBV was considered somewhat limited due to its small size and isolation. This site was not considered suitable for SWF due to its narrowness, minimal extent, and lack of any marshy component.

A portion of **Temescal Creek** was surveyed in 2011, but was discontinued in 2012. This area lies outside the Project's direct limits of disturbance, although it is within the biological buffer area immediately west of the Alberhill Substation. Habitat characteristics of this site were described in the 2011 riparian bird survey report. Prior to initiating the 2012 survey, it was known that this portion of Temescal Creek had already been slated to be surveyed as part of another project. In 2011, this portion of Temescal Creek was occupied by an LBV territory.

The **CWR2-1** survey area contains relatively mature willow and cottonwood riparian woodland, which occurs in somewhat narrow stands bordering the San Jacinto River, immediately upstream of Auto Center Drive (Appendix B, Figure B-3). This habitat also continues upstream from CWR2-1, extending to Interstate 15, approximately 450 feet northeast of CWR2-1. The San Jacinto River along this stretch was carrying running water through a good portion of the survey period (i.e., approximately April to June). During July only one fairly small pool remained, which held some surface water until the end of the survey (July 23, 2012). This survey area, along with the riparian woodland continuing upstream of the site, was considered to be of relatively good quality for riparian birds due to well-developed structure, understory component, and minimal

amounts of nonnative vegetation. Its primary limitation is the narrowness of the riparian corridor and the proximity of development that borders the river at this location.

The **TS1-1** survey area is immediately downstream of CWR2-1, separated only by the Casino Road bridge (Appendix B, Figure B-3). The vegetation within TS1-1, which lines a broader and more open section of the San Jacinto River, appears as a significantly more disturbed riparian community. Although it still supports a few mature willow trees, it is dominated by nonnative vegetation, including salt cedar and giant reed. The upper banks of this survey area were also dominated by ruderal vegetation (e.g., mustard [*Brassica* sp.], tocalote [*Centaurea melitensis*], and castor bean (*Ricinus communis*)]. This site was considered marginal for LBV, and unsuitable for SWF.

SWS1-1 is a very small survey area consisting primarily of a few young willow trees growing in an otherwise open field (Appendix B, Figure B-4). Approximately 150 feet west of the SWS1-1 survey area, however, there is fairly extensive riparian scrub habitat. This habitat is characterized by a mix of young to moderate-aged willows and large stands of salt cedar. A small portion of this adjacent and more extensive riparian scrub lies within the biological buffer that was surveyed for SWS1-1. This riparian scrub habitat did not appear to be associated with any noticeable drainage, as the terrain throughout this area is relatively flat. The habitat quality of this survey area was considered moderate to poor, due to the limited amount of native riparian vegetation, the relatively dry nature of the area, and the disturbance associated with homeless encampments and illegal dumping.

SWS4-1 supports a mix of trees, including a few mature coast live oaks and evergreen ash (*Fraxinus uhdei*) (Appendix B, Figure B-5). This survey area was quite dry, had a minimal understory, and merged into a chaparral plant community to the west. SWS4-1 showed noticeable evidence of human disturbance, with Beverly Road and multiple residential units immediately to the north and a dirt road to the east. This site was considered marginal for LBV, and unsuitable for SWF.

Survey sites **SWS2-1**, **SWS3-1**, and **SWS5-1** were relatively small and close together (Appendix B, Figure B-6). In general, they supported a broad mix of trees, including several mature willows (especially within the SWS5-1 site), coast live oak, and eucalyptus trees (*Eucalyptus* sp.). All sites lacked a significant understory component and were fairly heavily disturbed by significant human activity. Sites SWS3-1 and SWS5-1 lie immediately adjacent to busy Bundy Canyon Road, and residences border the SWS5-1 site to the east and west. A fenced storage area and illegal dumping were noted adjacent to the SWS2-1 and SWS3-1 sites.

The **SWS7-1** survey area consisted of a broken and very narrow string of young willows bisected by Waldon Road (Appendix B, Figure B-7). Immediately to the north are rural residential properties. The habitat quality of this survey area was considered poor due to the degree of human disturbance, the extent of nonnative vegetation, and the very limited extent and overall sparseness of riparian vegetation. Subsequent to the completion of the 2011 survey, the property owners apparently cut back most of this vegetation. Therefore, due to its unsuitability for either LBV or SWF, the SWS7-1 site was eliminated from the 2012 survey effort.

SWS10-1 follows a small drainage through an agricultural field (Appendix B, Figure B-8). The drainage is bordered narrowly with young willows and mulefat. Although nearly 600 feet in length, the very busy Murrieta Road parallels this survey site as close as 40 feet to the west. The willow scrub habitat is very narrow and is disturbed by active farming practices. The habitat quality of this survey area was considered marginal for LBV, and unsuitable for SWF.

The **SWS11-1** survey area is primarily in a front yard of a rural residential property and lies immediately east of Byers Road (Appendix B, Figure B-9). It consists of a very narrow strip of young willows which have a minimal understory and are quite sparse. The habitat quality of this site was considered relatively poor due to the sparseness and small extent of vegetation, and degree of human disturbance at this location. Although it had been included in the previous riparian bird surveys for this project, it was considered appropriate to eliminate SWS11-1 from the 2012 survey effort.

CWR4-1 was located on a small drainage that runs through several rural residential properties (Appendix B, Figure B-10). The survey area consisted of several mature willows and cottonwoods, as well as a mix of nonnative trees and shrubs. Due to private property issues, the only access to the site was by way of Holland Road, which runs east-west through the middle of CWR4-1. As several horses were kept on the property to the north of Holland Road and had access to the riparian habitat, the understory habitat was noticeably disturbed. South of Holland Road, due to denseness of the tree canopy and possible thinning by the property owner, the understory vegetation was fairly minimal and also disturbed in appearance. This survey area was considered marginal for LBV, and unsuitable for SWF.

3.2 Least Bell's Vireo

LBV territories were located within, or adjacent to two of the survey areas that were included in the 2012 LBV/SWF focused survey (CWR2-1 and SWS1-1). As during the 2010 and 2011 surveys, an LBV territory was again present in relatively mature willow-cottonwood riparian habitat immediately upstream of the CWR2-1 survey area. At least one LBV, generally a singing male, was recorded on most site visits here, with the exception of the fourth and eighth (May 25 and July 9, 2012, respectively). As in 2011, this LBV territory was assumed to be occupied by a breeding pair. During most visits only the territorial (i.e., singing) male was detected, but on the April 27 site visit an LBV was observed foraging quietly down low while the male sang steadily in nearby trees. Also, during the June 5 site visit, the singing male was making repeat visits to a clump of Oleander (*Nerium oleander*) that was high up on the slope north of the San Jacinto River riparian habitat. This was only 30 feet from the edge of the auto dealership, and at least 200 feet from the riparian habitat where it generally would be present. This behavior was atypical for the LBV individuals at this location, and may well have been indicative of adults attending to recently fledged young that were beginning to wander. On July 2, a second territorial male was heard singing immediately upstream (i.e., east) of the I-15 Freeway bridge.

A pair of LBV was also suspected of being present in the vicinity of the SWS1-1 survey area. A territorial male was detected on the May 14 and June 22 site visits. During these visits the bird would be approximately 600 to 800 feet north-northwest of the SWS1-1 survey area. This was in the same general area where an apparent bachelor male LBV was present for part of the 2010 survey season. No LBV had been detected here during 2011 season, however. On the June 22, 2012 visit, a second LBV was detected quietly foraging in saltcedar approximately 275 feet northwest of the survey area. It was suspected that this was an adult bird, and most likely represented the mate of the nearby territorial male.

No additional LBVs were found during the completion of this focused survey.

3.3 Southwestern Willow Flycatcher

No SWF were detected during the 2012 survey in any of the survey areas, whether or not the areas were considered to have potential habitat for the species. At the one specific site considered to be at least marginally suitable for SWF (i.e., CWR2-1) a somewhat larger buffer area was generally surveyed (up to 400 feet from the Project's anticipated direct limits of disturbance). The larger survey buffer was chosen here due to the higher quality riparian habitat, and the presence of high quality habitat continuing uninterrupted upstream of the survey area. The majority of the survey areas are fairly small and isolated from any areas of contiguous riparian habitat.

As stated above, the CWR2-1 survey area was the only site during the 2012 season that appeared to show several of the characteristics of SWF breeding habitat; therefore, this was the only site where SWF survey protocol was employed. The remaining sites were considered unsuitable as SWF breeding habitat due to the lack of surface water, the lack of a marshy or herbaceous wetland understory, and often the very limited extent and fairly sparse structure of the riparian vegetation. It is not unusual to encounter migrant willow flycatchers in southern California during the expected spring migration window for this species (primarily mid-May to mid-June). These individuals will only be encountered up to approximately mid-June. Although it is impossible to differentiate willow flycatcher subspecies in the field, migrants are very unlikely to be of the SWF subspecies. In summary then, no SWFs were detected during this 2012 LBV/SWF survey, and neither were any migrant willow flycatchers detected during the survey.

3.4 Brown-Headed Cowbirds

Somewhat surprisingly, brown-headed cowbirds were only detected (seen or heard) on three of the nine surveys in 2012. In 2011 cowbirds were recorded on all nine surveys, although most of these were detected in the Temescal Creek survey area (one of the areas not surveyed in 2012). On April 27, 2012, a male and female were seen and heard near the TS1-1 survey area; on May 14, one or two were heard on the Alberhill Substation site; and on June 5 one was heard calling from trees immediately adjacent to the CWR2-1 survey location.

Although it seemed that lower numbers of cowbirds were present in 2012, this may be mostly a factor of the differences in sites surveyed between 2011 and 2012. With the continued presence of horses in the general vicinity of the proposed Alberhill Substation site, and the fairly extensive riparian habitat and adjacent pasture land along Temescal Creek, this general area remains prime habitat for this brood parasite. No cowbird traps were noted here, or at any of the survey locations.

3.5 Other Special Status Avian Species

In addition to LBV, three special status bird species were identified during the course of this focused LBV/SWF survey. These included golden eagle (*Aquila chrysaetos*), California gnatcatcher (*Polioptila californica*), and yellow warbler (*Setophaga petechia*). CDFW recognizes the golden eagle as a Fully Protected (FP) species, and nesting yellow warblers as California Species of Special Concern (SSC). The California gnatcatcher is federally listed as a Threatened Species. The FP classification was California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Many of the FP species were subsequently listed under the state and/or federal endangered species acts, although the golden eagle is one of the few that has not. SSC species are those which have not been afforded protection under either the state or federal endangered species act, but for which there is conservation concern due to declining populations, limited ranges, and/or continuing threats to their existence.

Single golden eagles were seen on two occasions (April 27 and June 5) during the 2012 focused riparian bird surveys. In both cases, the birds appeared to be adults, and were perched on the large rocky outcrops about ¼ mile north-northwest of the Alberhill Substation site. Yellow warblers are fairly common spring migrants through southern California; therefore, breeding territories were assumed only when (1) singing males were present through the breeding season, (2) male-female pairs were observed, or (3) a family group was observed. Single territorial male yellow warblers were recorded at two of the survey locations: CWR2-1 (where also present in 2011) and about 500' north of TS1-1. A female or juvenile yellow warbler was observed approximately 250' north of TS1-1 on July 9, which was evidence of a potential breeding pair in the vicinity of this survey area. Outside the riparian bird survey area for 2012, one or two territorial yellow warblers were consistently heard singing from Temescal Creek, across from the entrance to the substation site. Multiple yellow warbler territories were present in this general area in 2010 and 2011.

One adult male California gnatcatcher (CAGN) was observed along the east edge of the Alberhill Substation, on the April 27 site visit. A pair of CAGNs have been observed in this area in past years, and is

presumably the location of a breeding territory. On July 2 and 23, during surveys of the spring-fed riparian patch in the canyon east of the substation, one to two CAGNs were heard or seen on the Riversidean sage scrub covered slopes below the spring. During observations of these birds, plumage features and behavior was detected that would indicate they were likely juveniles. It is assumed that these may well have been young dispersing from the suspected breeding territory about 0.25 miles to the southwest.

In addition to birds, at the two survey sites along the San Jacinto River (TS1-1 and CWR2-1), single orange-throated whiptails (*Aspidoscelis hyperythra*) were observed on April 12 and 27 site visits. This small whiptail is recognized as an SSC.

3.6 Survey Results Summary

No SWF was located during this focused survey conducted by AECOM for the Alberhill System Project. Single LBV territories were detected adjacent to, or slightly within, two of the survey areas (CWR2-1 and SWS1-1). Only three of the 2012 survey areas (i.e., the spring-fed riparian patch, CWR2-1, and SWS1-1) appeared to have a moderate potential to be breeding habitat for LBV. The remaining survey areas were considered to have only marginally suitable habitat for LBV. Only one of the survey areas (CWR2-1) was considered to have marginal potential as SWF breeding habitat, while the remaining were considered to be unsuitable for this species.

In addition to LBV, four other special status birds were recorded during this focused survey, which included golden eagle, Vaux's swift, California gnatcatcher, and yellow warbler. With the exception of yellow warbler, all of these species were present in the vicinity of, but not within, the LBV/SWF survey areas for this Project.

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APPENDIX A

AVIAN SPECIES LIST for 2012

The following is a list of all bird species detected during the focused riparian bird survey and burrowing owl survey for the Alberhill System Project (conducted between April 5 and July 23, 2012). Nomenclature and taxonomy for birds follow the American Ornithologists' Union Seventh Edition of the Checklist of North American Birds (1998), and the 53rd Supplement. Incidental to the bird survey, a few mammals and reptiles were observed, and these are included at the end of this species list.

Family and Common Name	Scientific Name
BIRDS	
Anatidae (Swans, Geese and Ducks)	
Mallard Cinnamon teal	*Anas platyrhynchos* *Anas cyanoptera*
Odontophoridae (New World Quail)	
California quail	*Callipepla californica*
Phalacrocoracidae (Cormorants)	
Double-crested cormorant	*Phalacrocorax auritus*
Ardeidae (Herons and Bitterns)	
Great egret Snowy egret Black-crowned night-heron	*Ardea alba* *Egretta thula* *Nycticorax nycticorax*
Cathartidae (New World Vultures)	
Turkey vulture	*Cathartes aura*
Accipitridae (Hawks, Kites, Eagles and allies)	
White-tailed kite Cooper's hawk Red-shouldered hawk Swainson's hawk Red-tailed hawk Golden eagle	*Elanus leucurus* – FP *Accipiter cooperii* *Buteo lineatus* *Buteo swainsoni* – ST *Buteo jamaicensis* *Aquila chrysaetos* – FP
Rallidae (Rails, Coots and allies)	
American coot	*Fulica americana*
Charadriidae (Plovers)	
Killdeer	*Charadrius vociferous*

Family and Common Name	Scientific Name
Laridae (Gulls, Terns, and Skimmers)	
California gull	*Larus californicus*
Columbidae (Pigeons and Doves)	
Rock pigeon Eurasian collared-dove Mourning dove	*Columba livia* – I *Streptopelia decaocto* – I *Zenaida macroura*
Strigidae (Typical owls)	
Burrowing owl	*Athene cunicularia*
Apodidaie (Swifts)	
White-throated swift	*Aeronautes saxatalis*
Trochilidae (Hummingbirds)	
Black-chinned hummingbird Anna's hummingbird Costa's hummingbird Allen's/Rufous hummingbird	*Archilochus alexandri* *Calypte anna* *Calypte costae* *Selasphorus sasin/rufus*
Picidae (Woodpecker)	
Acorn woodpecker Nuttall's woodpecker Northern flicker	*Melanerpes formicivorus* *Picoides nuttallii* *Colaptes auratus*
Falconidae (Caracaras and Falcons)	
American kestrel Merlin	*Falco sparverius* *Falco columbarius*
Tyrannidae (Tyrant Flycatchers)	
Pacific-slope flycatcher Black phoebe Say's phoebe Ash-throated flycatcher Cassin's kingbird Western kingbird	*Empidonax difficilis* *Sayornis nigricans* *Sayornis saya* *Myiarchus cinerascens* *Tyrannus verticalis* *Tyrannus vociferans*
Vireonidae (Vireos)	
Bell's vireo Cassin's vireo Hutton's vireo	*Vireo bellii* – FE, SE *Vireo cassinii* *Vireo huttoni*
Corvidae (Ravens, Crows, Jays, and allies)	
Western scrub-jay American crow Common raven	*Aphelocoma californica* *Corvus brachyrhynchos* *Corvus corax*

Family and Common Name	Scientific Name
Alaudidae (Larks)	
Horned lark	*Eremophila alpestris*
Hirundinidae (Swallows)	
Northern rough-winged swallow Cliff swallow	*Stelgidopteryx serripennis* *Petrochelidon pyrrhonota*
Paridae (Chickadees and Titmice)	
Oak titmouse	*Baeolophus inornatus*
Aegithalidae (Bushtits)	
Bushtit	*Psaltriparus minimus*
Troglodytidae (Wrens)	
Rock wren Bewick's wren House wren	*Salpinctes obsoletus* *Thryomanes bewickii* *Troglodytes aedon*
Polioptilidae (Gnatcatchers)	
California gnatcatcher	*Polioptila californica* – FT, SSC
Turdidae (Thrushes)	
Swainson's thrush Hermit thrush	*Catharus ustulatus* *Catharus guttatus*
Mimidae (Mockingbirds and Thrashers)	
Northern mockingbird California thrasher	*Mimus polyglottos* *Toxostoma redivivum*
Sturnidae (Starlings)	
European starling	*Sturnus vulgaris* – I
Motacillidae (Pipits and allies)	
American pipit	*Anthus rubescens*
Ptilogonatidae (Silky-flycatchers)	
Phainopepla	*Phainopepla nitens*
Parulidae (Wood Warblers)	
Yellow warbler Yellow-rumped warbler MacGillivray's warbler Wilson's warbler Common yellowthroat	*Setophaga petechia* - SSC *Setophaga coronata* *Geothlypis tolmiei* *Cardellina pusilla* *Geothlypis trichas*

Family and Common Name	Scientific Name
Emberizidae (Sparrows and allies)	
Spotted towhee	*Pipilo maculatus*
Rufous-crowned sparrow	*Aimophila ruficeps*
California towhee	*Melozone crissalis*
Lark sparrow	*Chondestes grammacus*
Sage sparrow	*Artemisiospiza belli*
Savannah sparrow	*Passerculus sandwichensis*
Song sparrow	*Melospiza melodia*
White-crowned Sparrow	*Zonotrichia leucophrys*
Dark-eyed Junco	*Junco hyemalis*
Cardinalidae (Cardinals, Grosbeaks, and allies)	
Western tanager	*Piranga ludovicianus*
Black-headed grosbeak	*Pheucticus melanocephalus*
Blue grosbeak	*Passerina caerulea*
Icteridae (Blackbirds, Orioles and Allies)	
Red-winged blackbird	*Agelaius phoeniceus*
Western meadowlark	*Sturnella neglecta*
Brewer's blackbird	*Euphagus cyanocephalus*
Brown-headed cowbird	*Molothrus ater*
Bullock's oriole	*Icterus bullockii*
Hooded oriole	*Icterus galbula*
Fringillidae (Finches)	
Purple finch	*Haemorhous purpureus*
House finch	*Haemorhous mexicanus*
American goldfinch	*Spinus tristis*
Lesser goldfinch	*Spinus psaltria*
Lawrence's goldfinch	*Spinus lawrencei*

Family and Common Name	Scientific Name
Passeridae (Old World Sparrows)	
House sparrow	*Passer domesticus* - I
MAMMALS	
Bobcat	*Lynx rufus*
Coyote	*Canis latrans*
California ground squirrel	*Spermophilus beecheyi*
Cottontail	*Sylvilagus audubonii*
Black-tailed jackrabbit	*Lepus californicus*
REPTILES	
Rosy boa	*Charina trivirgata*
Western fence lizard	*Sceloporus occidentalis*
Side-blotched lizard	*Uta stansburiana*
Orange-throated whiptail	*Aspidoscelis hyperythra* – SSC

Legend

FP	A CDFG Fully Protected species
FT	A USFWS Federally Threatened species
FE	A USFWS Federally Endangered species
SE	A CDFW State Endangered species
ST	A CDFW State Threatened species
SSC	A CDFW State Species of Special Concern (only for breeding individuals/populations for certain bird species)
I	Introduced (nonnative) species

Appendix B
Survey Area Figures

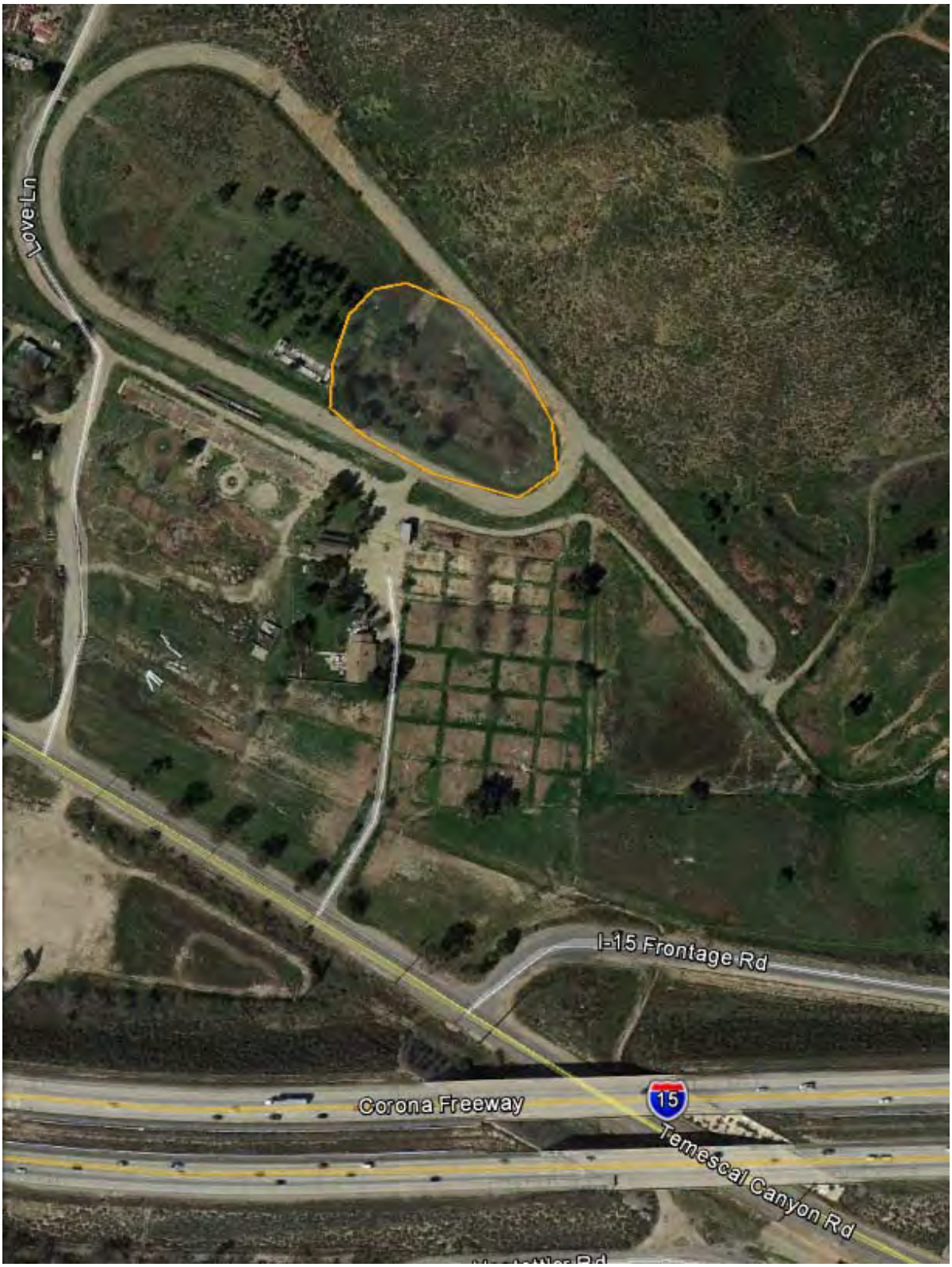


Figure B-1: Alberhill Substation pond survey area (Google Earth 2011)



Figure B-2: Spring-fed patch of riparian habitat that is located in an unnamed canyon approximately 0.3 miles east of the Alberhill Substation (Google Earth 2011)



Figure B-3: CWR2-1 and TS1-1 survey areas. Green area depicts the LBV territory detected during surveys. At least one LBV, generally a singing male, was recorded on most site visits, with the exception of the fourth and eighth (May 25 and July 9, 2012, respectively) (Google Earth 2011)



Figure B-4: SWS1-1 survey area. Green area depicts the LBV territory detected during surveys. A territorial male was detected on the May 14 and June 22 site visits. During these visits the bird would be approximately 600 to 800 feet north-northwest of the SWS1-1 survey area. (Google Earth 2011)



Figure B-5: SWS4-1 survey area (Google Earth 2011)



Figure B-6: SWS2-1, SWS3-1, and SWS5-1 survey areas (Google Earth 2011)



Figure B-7: SWS7-1 survey areas (Google Earth 2011)



Figure B-8: SWS10-1 survey areas (Google Earth 2011)



Figure B-9: SWS11-1 survey areas (Google Earth 2011)



Figure B-10: CWR4-1 survey areas (Google Earth 2011)

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DRAFT
ALBERHILL SYSTEM PROJECT
2011 OAK TREE IMPACT REPORT

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

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AECOM

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JANUARY 2012

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List of Acronyms

BTR	Biological Technical Report
DBH	diameter at breast height
HRRP	Habitat Restoration and Revegetation Plan
kV	kiloVolt
mm	millimeter
MVA	Mega Volt Ampere
RCA	Riverside County Regional Conservation Authority
Sub	subtransmission
T/L	transmission line
USGS	United States Geological Survey
WRCMSHCP	Western Riverside County Multiple Species Habitat Conservation Plan

1.0 Introduction

1.1 Purpose and Project Description

The purpose of this report is to document the results of the 2011 oak tree surveys conducted for the Alberhill System Project (Project) during fall-winter 2011.

The purpose of the oak tree surveys was to determine presence, quantity, and general quality of trees within the genus *Quercus* identified within or adjacent to the Project. The Project is located within Riverside County (County), which grants protection to all native oaks with a diameter at breast height (DBH) greater than 2 inches. Project activities which may impact or encroach upon native oaks require an oak tree permit from the Riverside County Regional Conservation Authority (RCA) to commence.

Southern California Edison (SCE) proposes to construct the Project to serve current and projected demand for electricity and maintain electric system reliability in southwestern Riverside County (Figure 1).

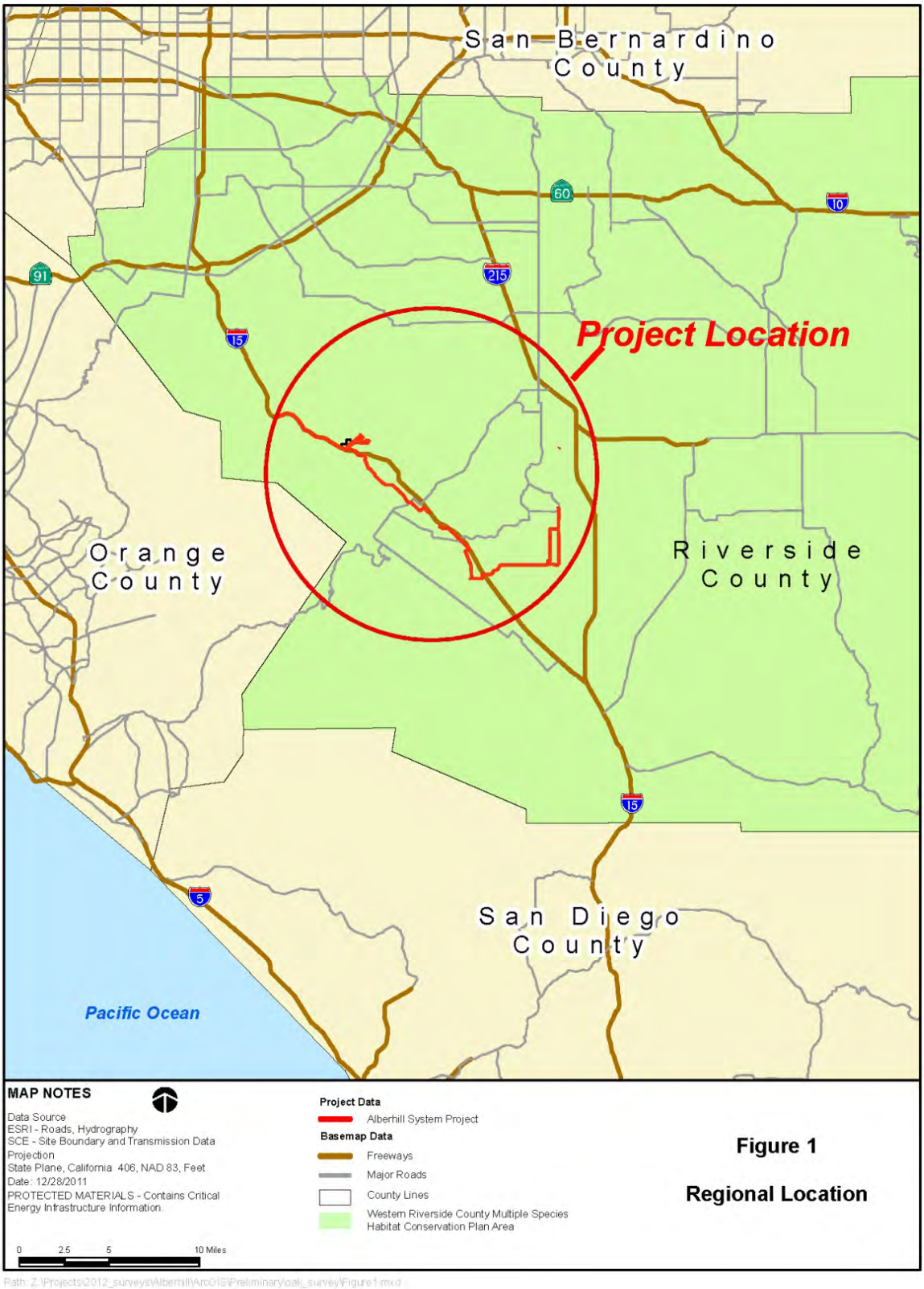
The Project Area is defined as the area analyzed for the following Project components: the proposed Alberhill Substation, the proposed 500-kiloVolt (kV) transmission lines (T/L), the alternative 500-kV T/L, the proposed 115-kV Subtransmission (Sub) T/L, and the alternative 115-kV Sub T/L.

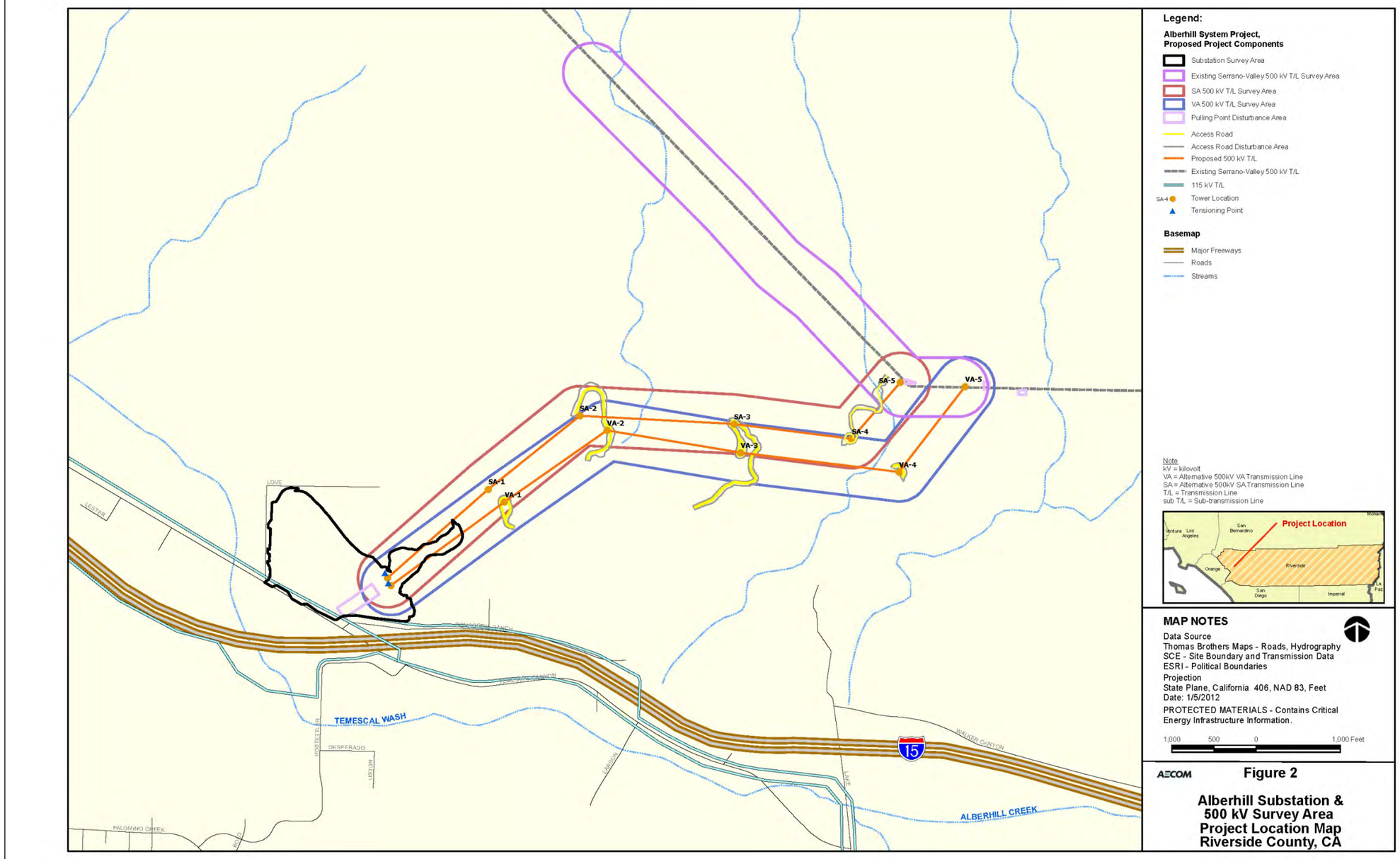
- The proposed Alberhill Substation would be an unstaffed, automated 1,120 Mega Volt Ampere (MVA) 500/115-kV substation with an ultimate build-out of 1,680 MVA. Based on the preliminary design, approximately 8,000 cubic yards of soil, vegetation, and rock would be removed from the site (area of anticipated direct impact). In addition, approximately 10,320 cubic yards of soil would be removed as a result of excavation for foundation and building footings. Demolition of the existing horse ranch and relocation of a 30-inch gravity agricultural water line (owned and operated by Elsinore Valley Municipal Water District) would be required prior to mass grading. The horse ranch and adjacent undeveloped areas compose the Alberhill Substation Survey Area (Figure 2).

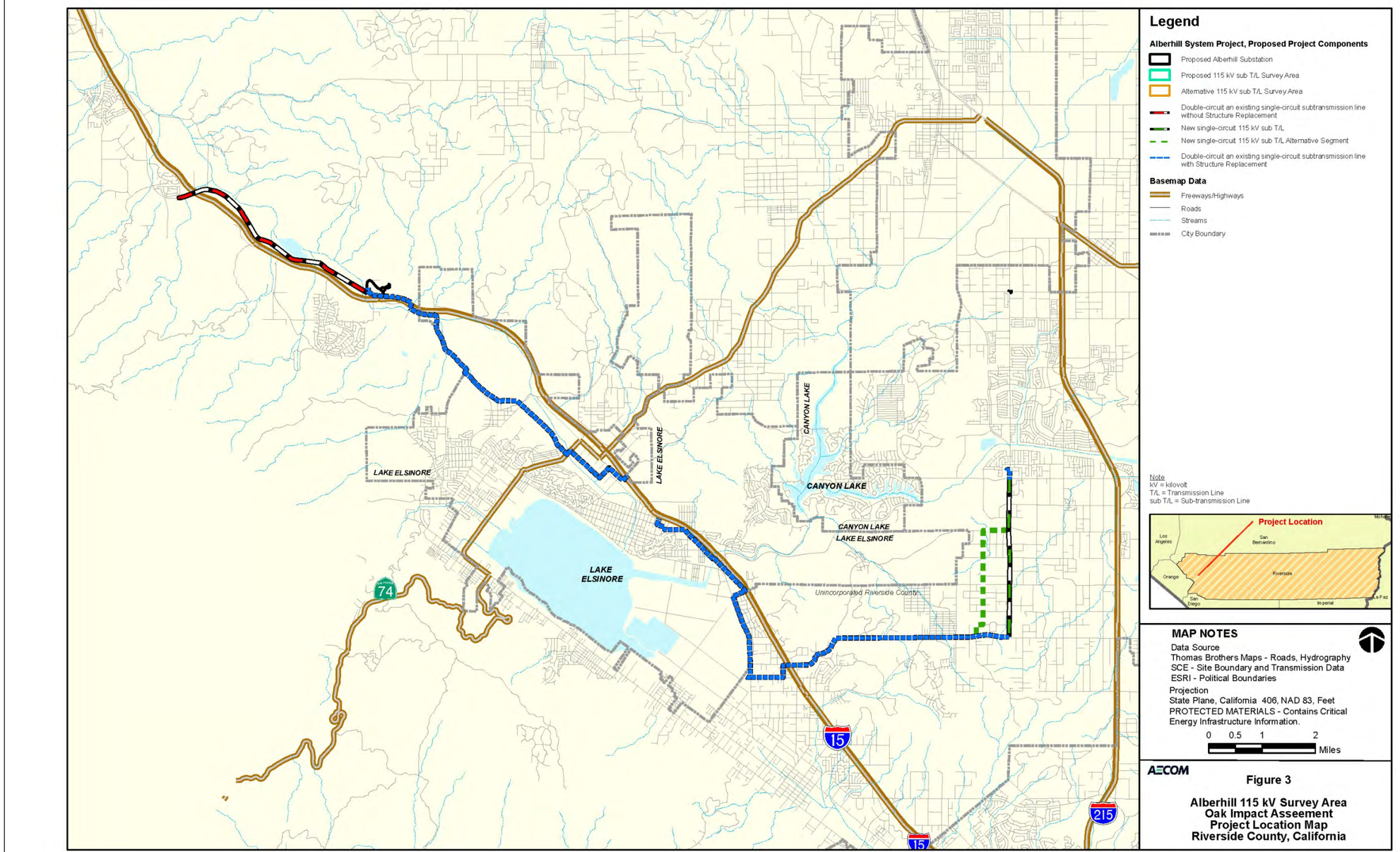
- The proposed 500-kV T/Ls would connect the proposed Alberhill Substation to SCE's existing Serrano-Valley 500-kV T/L.

- The components of the 500-kV T/L include the following: the proposed SA 500-kV T/L (SA survey area [to the Alberhill Substation]) and the proposed VA 500-kV T/L (VA Survey Area [from the Alberhill Substation]). Both of these survey areas, as well as the proposed pull, tensioning locations, and access roads are referred to as the proposed 500-kV T/L Survey Area (see Figure 2).

- The proposed 115-kV Sub T/L (Figure 3) would consist of a new 115-kV Sub T/L and modification of the existing 115-kV Sub T/L. The 115-kV Sub T/L would transfer electrical service of five existing 115/12-kV substations (Ivyglen, Fogarty, Elsinore, Skylark, and Newcomb substations) to the new 500/115-kV Alberhill Substation.


San Bernardino County
Project Location
Orange County
Riverside County
San Diego County
Pacific Ocean
60
10
91
215
15
5
MAP NOTES
Data Source
ESRI - Roads, Hydrography
SCE - Site Boundary and Transmission Data
Projection
State Plane, California 406, NAD 83, Feet
Date: 12/28/2011
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 2.5 5 10 Miles
Project Data
Alberhill System Project
Basemap Data
Freeways
Major Roads
County Lines
Western Riverside County Multiple Species Habitat Conservation Plan Area
Figure 1
Regional Location
Path: Z:\Projects\2012_surveys\Alberhill\ArcGIS\Preliminary\oak_survey\Figure1.mxd


SA-5
VA-5
SA-2
VA-2
SA-3
VA-3
SA-4
VA-4
SA-1
VA-1
LOVE
LESTER
TEMESCAL WASH
DESPERADO
HOOPER
LISTON
LEROY
WALKER CANYON
ALBERHILL CREEK
PALOMINO CREEK
BRO
15
Legend:
Alberhill System Project,
Proposed Project Components
Substation Survey Area
Existing Serrano-Valley 500 kV T/L Survey Area
SA 500 kV T/L Survey Area
VA 500 kV T/L Survey Area
Pulling Point Disturbance Area
Access Road
Access Road Disturbance Area
Proposed 500 kV T/L
Existing Serrano-Valley 500 kV T/L
115 kV T/L
SA-4 Tower Location
Tensioning Point
Basemap
Major Freeways
Roads
Streams
Note
kV = kilovolt
VA = Alternative 500kV VA Transmission Line
SA = Alternative 500kV SA Transmission Line
T/L = Transmission Line
sub T/L = Sub-transmission Line
Project Location
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
La Paz
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Date: 1/5/2012
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
1,000 500 0 1,000 Feet
AECOM
Figure 2
Alberhill Substation &
500 kV Survey Area
Project Location Map
Riverside County, CA
Path: Z:\Projects\2012_surveys\Alberhill\ArcGIS\Preliminaryoak_survey\Figure 2.mxd


LAKE ELSINORE
LAKE ELSINORE
CANYON LAKE
CANYON LAKE
CANYON LAKE
LAKE ELSINORE
LAKE ELSINORE
Unincorporated Riverside County
74
15
15
215
Legend
Alberhill System Project, Proposed Project Components
Proposed Alberhill Substation
Proposed 115 kV sub T/L Survey Area
Alternative 115 kV sub T/L Survey Area
Double-circuit an existing single-circuit subtransmission line without Structure Replacement
New single-circuit 115 kV sub T/L
New single-circuit 115 kV sub T/L Alternative Segment
Double-circuit an existing single-circuit subtransmission line with Structure Replacement
Basemap Data
Freeways/Highways
Roads
Streams
City Boundary
Note
kV = Kilovolt
T/L = Transmission Line
sub T/L = Sub-transmission Line
Project Location
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
0 0.5 1 2
Miles
AECOM
Figure 3
Alberhill 115 kV Survey Area
Oak Impact Asseement
Project Location Map
Riverside County, California
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- An alternative segment for the proposed 115-kV Sub T/L has also been analyzed (alternative 115-kV Sub T/L). This alternative segment consists of an optional routing of the eastern portion of the proposed 115-kV Sub T/L (see Figure 3).

AECOM was tasked with conducting oak surveys within the Project Area.

Coast live oak (*Quercus agrifolia*) woodlands and individual coast live oak trees were located during field assessments conducted during fall and winter 2011. This report describes the survey methodology, presents survey results, and offers Project-specific recommendations for impact avoidance and mitigation to oak resources that were encountered during the 2011 field assessments.

1.2 Survey Locations

Survey locations within the Project Area corresponded to areas within 30 feet of known transmissions lines from the western Project boundary at the Interstate 15 freeway on Temescal Canyon Road to the eastern termination of the Alberhill 115-kV alternative route. Survey areas are detailed below.

1.2.1 Alberhill Substation Survey Area

The Alberhill Substation Survey Area is approximately 40 acres and is located within the Temescal Valley, south of Corona, California (see Figure 2). The Alberhill Substation Survey Area is located within the northwest ¼ of Section 16, Township 5 South, Range 5 West, in the City of Lake Elsinore, California and can be found on the Alberhill, CA 7.5-minute United States Geological Survey (USGS) topographic quadrangle (1980). The Alberhill Substation survey area elevation ranges from 1,175 to 1,280 feet above sea level (asl).

1.2.2 500-kV T/L Survey Areas

The proposed 500-kV T/L Survey Area is approximately 260 acres and is located northeast of the proposed Alberhill Substation site, running from the relatively steep Gavilan Hills on the northeast end to the proposed Alberhill Substation site on the southwest end (see Figure 2).

The 500-kV T/L Survey Area elevation ranges from 1,200 to 1,861 feet asl. It traverses unincorporated portions of Riverside County adjacent to the City of Lake Elsinore, California, and is found on the Alberhill CA 7.5-minute USGS topographic quadrangle, within the southern half of Section 10, the northern half of Section 15, and the northern half of Section 16, Township 5 South, Range 5 West.

1.2.3 115-kV Sub T/L Survey Area

The 115-kV Sub T/L Survey Area spans approximately 27 miles, traversing portions of Lake Elsinore, Menifee, and Wildomar, and other unincorporated areas of Riverside County (Figure 3). It ranges in elevation from 1,020 to 2,150 feet asl, and is located within the Alberhill, Lake Elsinore, Lake Matthews, Romoland, and Wildomar CA 7.5-minute USGS topographic quadrangles. The 115 kV survey area traverses:

- Sections 16, 17, and 32 of Township 5 South, Range 3 West;
- Sections 5, 8, 9, 17, and 18 of Township 6 South, Range 3 West,

- Section 31 of Township 5 South, Range 4 West; and
- Sections 1, 2, and 12 of Township 5 South, Range 6 West.

1.3 County of Riverside Oak Tree Management Guidelines

The 1999 County of Riverside Oak Tree Management Guidelines requires a focused survey which identifies the "*location and size of individual oak trees that are two (2) inches DBH or larger within proposed roads, driveways, and homesites including their protected zones as identified by a biologist and mapped by a surveyor or engineer on a map that is the same scale as the project map*". Project activities are required to be planned to minimize impacts to both individual oaks and oak woodlands. If avoidance is not feasible, the biological report shall include required mitigation, consistent with CEQA and applicable state or county codes and ordinances. The guidelines may be viewed in entirety within Appendix A.

2.0 Methodology

2.1 Scope of Work

The oak trees were visually surveyed and tagged by certified arborist Thomas Juhasz (WE-8262A) in the field over several weeks from October 18 to November 29, 2011. The certified arborist conducting the field assessments carried the following equipment:

- Aerial maps which included reference markers of the survey area;
- Trimble Juno SB units preloaded with Project Area data layers;
- Arboricultural field data sheets;
- Digital camera; and,
- Stainless steel tree diameter tape.

The trees were numbered and tagged with circular reinforced aluminum tags 1.5 inches in diameter that were generally placed on the north side of the trunk at breast height. Each tree was evaluated for a variety of health, structural, and aesthetic qualities as indicated on the field inspection worksheets in Appendix C. General data recorded for each individual oak included:

- Date, address, site ownership, and previous assessments for each tree;
- Tree health;
- Site conditions;
- Tree defects (noted as applicable);
- Trunk diameter and location; and
- Canopy coverage and extent.

The tree number, location, and canopy of each tree were mapped at a 100-scale (1 inch = 100 feet) on tree location maps located within Appendix B.

2.2 Tree Measurements

Three measurements were taken for each oak tree: trunk diameter at breast height (DBH), canopy spread, and height. DBH was measured at approximately 4½ feet (54 inches) above the natural grade. This measurement is typically utilized for trees with vertical growth forms. Oaks growing in their natural habitat frequently have asymmetrical growth forms with large, lateral branches diverging from the trunk at or near 4½ feet. For trees that exhibited lateral branching at DBH, measurements were taken for all applicable branches/trunks with the height noted at the point of divergence on the trunk. For multi-trunk specimens, the number of trunks and the DBH of each trunk were recorded. When no physical connection is apparent between the oaks, each trunk was evaluated as an individual tree.

Tree canopies were measured at the point where the crown terminates, known as the dripline. The maximum crown diameter for each tree was mapped with a Trimble Juno unit along the dripline of the tree to ascertain the extent of the core root zone of each oak. This core rootzone is essential to the survival of an oak. The protected zone of an oak as specified within Riverside County's Oak Tree Management Guidelines extends five feet outward from this drip line. Tree height is estimated to 5-foot variance to complete general health assessments. Measured heights will be required for Project-specific activities during the construction process (ratios for pruning etc).

2.3 Health Assessments

Health assessments for oaks focused on the structural and biological integrity of each tree. Specific structural issues evaluated for each tree include the following:

- Taper/form;
- Presence of codominants, forks;
- Included bark;
- Girdling, obstructions;
- Deadwood/cavities;
- Wounds/seams; and
- Root structure.

Specific biological issues evaluated for each tree include the following:

- Foliage color;
- Presence of epicormic growth;
- Foliage density;
- Leaf size;
- Woundwood development;
- Vigor class; and
- Major pests and diseases.

General health assessments help determine the vigor and vitality of each tree. This information will guide the determination of scope of impacts from Project activities. Results from the full visual health assessment performed during field sessions can be reviewed in Appendix C.

3.0 Tree Characteristics and Associated Site Conditions

Coast live oaks are the predominant oak within the survey area. Well adapted to the Mediterranean climate found in western Riverside County, these oaks are found typically on north-facing slopes and deep, alluvial soils with high water tables that retain more moisture during the summer dry period. The extensive root systems of coast live oaks make them well adapted to find moisture within the mixed annual grassland, riversidean sage scrub, and chamise chaparral habitats. Oaks within these habitats occur singly or in groves known as oak woodlands. When oaks are found within urbanized/altered areas, their specially adapted root systems make them vulnerable to impacts from human activities such as artificial irrigation, grading, and shifts in slope (Pavlik et al 1993).

Coast live oaks assessed during this effort ranged in height from five to 60 feet and DBHs ranged from two to 50 inches.

Trees identified within the Project Area during field assessments are mapped in Appendix B and discussed in Appendix C. Photographs of assessed oaks or oak woodlands may be viewed in Appendix D.

4.0 Project Impacts

This section provides a general evaluation of impacted and encroached trees within the Project Area. Impacted trees are those that are permanently and directly affected by project activities (removal required).

Two oaks (Oaks 86 and 87) will be impacted on the Alberhill substation site. The grubbing and grading required to create the substation pad will require the removal of these two young coast live oaks (Figure 4).

Encroached trees are not removed from the landscape but are affected by project activities through pruning and/or protected zone disturbance (trenching, etc.). Specific effects on encroached trees have not been evaluated within the 115-kV Sub T/L survey area, as the project is still within the planning process. Project activities will be minimized to the greatest extent by the Project proponent. Avoidance and minimization measures for encroached trees may be found within Subsections 5.1 and 5.2.


86
87
Legend:
Alberhill System Project,
Proposed Project Components
Substation Survey Area
Oak to be Removed
Double-circuit an existing single-circuit subtransmission line with Structure Replacement
Pulling Point Disturbance Area
Note
kV = kilovolt
VA = Alternative 500kV VA Transmission Line
SA = Alternative 500kV SA Transmission Line
T/L = Transmission Line
sub T/L = Sub-transmission Line
Location Map
Corona Fwy 15
Project Location
Ventura
Los Angeles
San Bernardino
Orange
Riverside
San Diego
Imperial
La Paz
MAP NOTES
Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries
Projection
State Plane, California 406, NAD 83, Feet
Date: 1/5/2012
PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.
50 25 0 50 Feet
AECOM
Figure 4
Alberhill System Project
Oaks to be Removed
Proposed Substation
Riverside County, CA
Path: Z:\Projects\2012_surveys\Alberhill\ArcGIS\PreliminaryOak_survey\Figure 4.mxd

1

5.0 Recommendations

5.1 Mitigation Measures

Two of the 269 oak trees surveyed are proposed for removal (Figure 4).

Avoidance would preclude most direct and encroachment impacts to coast live oaks in the Project Area). Preventive measures must be taken during construction activities to minimize impacts in the protected zone. Implementation of the following measures will ensure that the roots and crowns will not be significantly affected.

SCE will be responsible for notifying the RCA of any changes in the scope of the work and shall ensure that all work is performed in accordance with applicable ordinances, permits, and procedures. Work performed within the protected zones of the trees shall be preceded by not less than 48 hours notice to the RCA and the applicant's oak tree consultant (a certified arborist).

SCE will relocate the two oaks currently located within the boundary of the Alberhill System Substation Project Area to suitable habitat outside the Project Area. If the applicant cannot feasibly relocate either of the two impacted oaks, at least four minimum-15-gallon oaks will be planted within the appropriate habitat to replace impacted trees (2:1 ratio). These replacement trees shall consist of indigenous coast live oaks that have been grown in a natural form (no topping, street tree forming). The applicant shall be responsible for monitoring and maintaining the relocated or replacement trees for a minimum of two years. If relocated or replacement trees die during the two-year period, the applicant shall plant new replacement trees; and the two-year monitoring period shall begin again from the date of that planting.

5.2 Avoidance and Minimization Measures

AECOM recommends that an oak avoidance strategy be developed to minimize encroachment on oaks protected by County of Riverside Oak Tree Management Guidelines. Recommended avoidance and minimization measures described below are aimed at reducing potential impacts from construction-related activities on protected oak trees. These measures shall be approved by the RCA and the applicant's oak tree consultant prior to implementation.

- All work on the Project will be approved prior to construction by the RCA.
- The protected zone of each tree shall commence from a point 5 feet outside the dripline and extend inwards to the trunk of the tree. All approved work in the protected zone of trees will be done using hand implements; the use of mechanized tools is prohibited except where absolutely necessary AND as approved by the RCA. All work conducted within the protected zone of oak trees shall be performed in the presence of the applicant's oak tree consultant.
- Equipment, materials, and vehicles shall not be stored, parked, or operated within the protected zone of an oak tree, except on sites approved for this use by an oak tree consultant.
- Potentially impacted trees may benefit from supplemental irrigation prior to and during construction. The oak tree consultant shall recommend an irrigation regimen if necessary.

- Removal of the natural leaf mulch within the protected zone of oak trees is prohibited except where absolutely necessary AND as approved by the oak tree consultant.

- All trees not approved for removal shall be fenced in accordance with County of Riverside Oak Tree Management Guidelines prior to commencement of any heavy equipment operation and shall remain fenced until the RCA approves the removal of fencing. Encroachment trees shall also be fenced until the actual encroachment work is performed. At that time, the fencing shall be moved to the limit of the encroachment.

- Any pruning, including removal of dead wood, shall be performed in compliance with the latest ANSI pruning standards by a certified arborist (or certified tree worker).

- Any root-pruning required within the protected zone of an oak shall be reduced to the minimum amount that is absolutely necessary. All roots pruned shall consist of clean, 90-degree angle cuts utilizing sharp hand tools and shall not be sealed unless directed by the RCA. Any major roots (2 inches or greater in diameter) encountered shall be preserved to the extent possible and wrapped in moist burlap until the soil is replaced. Soil shall be replaced around preserved roots as soon as possible.

- Dust accumulation on the canopy of the preserved and encroached trees shall be washed off at the direction of the oak tree consultant.

- Within 10 working days of completion of the work approved under this permit, the oak tree consultant shall provide a certification letter to the RCA.

6.0 Disclaimer

This report represents the independent opinion of the consultant (AECOM). The trees discussed herein were generally reviewed for physiological structure and function as well as biological importance. This examination was conducted in accordance with presently accepted industry procedures, which are a ground-plane, macro-visual observation only. No extensive micro-biological, soil-root excavations, upper crown examination, nor internal tree investigations were conducted; and, therefore, the reporting herein reflects the overall visual appearance of the trees on the date(s) reviewed and no warranty is implied to the potential failure, health, or demise of any part or whole of any tree described in the report. Records may not remain accurate after inspection due to unknown causes of changeable deterioration of the reviewed site and/or changes in project scope.

7.0 References

AECOM, 2009b. Final Biological Resources Technical Report for the Proposed Alberhill System Project, Volume I and II, October.

Pavlik, Bruce M., Pamela Muick, and Sharon Jonson, 1993. *Oaks of California*. Oakland, CA. Cachuma Press.

Riverside County, 2003. Riverside County Oak Management Guidelines. Online. http://www.rctlma.org/planning/content/devproc/guidelines/oak_trees/oak_trees.html.

Appendix A

County of Riverside Oak Tree Management Guidelines

Riverside County Oak Tree Management Guidelines

RIVERSIDE COUNTY
PLANNING DEPARTMENT

Accessible Site Map | Search Site

Transportation & Land Management Agency

Development Process | Zoning Information | Public Hearings | Specific Plans | General Information

Location: Planning Home > Development Process > Design Guidelines > Oak Tree Management Guidelines

RIVERSIDE COUNTY OAK TREE MANAGEMENT GUIDELINES

(Approved by the Board of Supervisors on March 2, 1993)

These guidelines are intended to address the treatment of oak woodlands in areas where zoning and/or general plan density restrictions will allow the effective use of clustering. Generally, these guidelines will be most effective where minimum lot sizes of 2.5 acres or larger are required or where oak woodlands are concentrated in a relatively small portion of a project site. While it is expected that most projects that follow these guidelines will reduce project impacts on oak trees to a level of insignificance, these guidelines in no way exempt a project from being reviewed pursuant to the California Environmental Quality Act (CEQA) and being evaluated for significant project impacts to oak trees.

DEFINITIONS

Biologist - individual qualified by the County of Riverside to perform a biological survey.

Breast Height - 4.5 feet above ground level at the base of the tree.

Clustering - the grouping together of homesites in a manner that maximizes the preservation of oak trees through the use of transfer of density, unless precluded by the general plan, unusual lot line configurations, placement of roads within lot boundaries, and other creative design techniques. Overall project density and minimum lot size requirements of the site's zoning or applicable general plan policies may not be varied pursuant to this policy, unless such variances are otherwise permitted by the applicable provisions of the general plan or project zoning.

Conservation Agency - The Riverside County Regional Park and Open Space District, a land conservancy, or a County Service District or other agency with authorization to protect open space that can demonstrate that it possesses biological expertise in monitoring and maintaining open space.

Construction Zone - area within which construction activity can occur with no impact to oak trees.

DBH - Diameter at Breast Height. A standard of measurement for determining the size of a tree based on its trunk diameter.

Dead Tree - an oak tree containing no living tissue (i.e. live limbs or green leaves).

Drip Line - the outermost edge of a tree's canopy. When depicted in plan view, the drip line will appear as an irregularly shaped circle defining the canopy perimeter. See Image Below

Dying Tree - an oak tree unlikely to survive as determined with appropriate justification by a qualified biologist.

Habitat Restoration - the establishment of a self-sufficient, self-renewing, permanent native vegetation consisting primarily of plant species native to the site. Such efforts may require temporary, monitored care.

Homesite - the graded or altered area created for a home or other occupied structure and its incidental uses, including septic systems, wells, trenches, animal pasture and corrals, etc.

Oak Tree - an individual plant of the genus *Quercus*, including in Riverside County the species *Q. agrifolia, Q. chrysolepis, Q. engelmannii, Q. kelloggii, Q. morehus, and Q. wislezenii*. Individual trees shall not be subject to these guidelines unless their trunks are larger than two inches in DBH for a single trunk or the sum of the diameters of multiple trunks at breast height.

http://www.rctlma.org/planning/content/devproc/guidelines/oak_trees/oak_trees.html[10/28/2011 9:38:31 AM]

Riverside County Oak Tree Management Guidelines

Oak Woodland - an area of natural vegetation that includes at least one oak tree and associated understory. An area of oak woodland can be many acres in extent or as small as a single tree.

Protected Zone - a circle whose center is within the base of an oak tree, the radius of which is equal to an oak tree's height or 10 feet, whichever is greater. Where the outermost edge of an oak tree's drip line extends beyond this radius, that portion of the drip line shall also be included as part of that tree's protected zone. Protected zones do not apply to dead or dying oak trees, unless the tree's condition appears to be the result of human activity that indicates an intent to kill the tree.

Understory - native shrubs, grasses, and other plants that are associated with trees in an oak woodland.

GUIDELINES FOR PROPERTIES WITH OAK TREE RESOURCES

- A biological study will be required for all applications on properties that contain oak trees.
  - An inventory of on-site vegetation shall be required, which shall include:
    - The location and size of individual oak trees that are two (2) inches DBH or larger within proposed roads, driveways, and homesites including their protected zones as identified by a biologist and mapped by a surveyor or engineer on a map that is the same scale as the project map.
    - An accurate depiction of the distance and direction of all proposed grading.
    - Identification of boundaries of plant communities.
    - Dead or dying trees within proposed roads, driveways, or homesites shall be identified and evaluated for their value to cavity nesting birds.
  - Impacts of the proposed development shall be identified and quantified.
  - All possible options for mitigation measures shall be identified, including redesign/clustering, if impacts cannot be avoided by the project as proposed.
  - The biological report shall include required mitigation, consistent with CEQA and applicable State or County codes and ordinances.
  - The mitigation program shall be incorporated into the project's conditions of approval.
- Designs that cluster homesites together will be strongly encouraged when such a design would significantly reduce the impacts to oaks: however, such clustering shall not result in an increase in the density or reduction of the minimum lot size requirements of the Comprehensive General Plan absent a General Plan Amendment. Under these guidelines, clustering is not intended to be used in a manner that increases the overall impact on oak trees in order to avoid other constraints that could otherwise reduce project density. Clustering may only be permitted when it will significantly reduce the overall impact on oak trees, or where it will reduce impacts on other constrained areas while avoiding all impacts to oaks. When it would achieve the objectives of these guidelines, lot lines are strongly encouraged to be creatively placed to achieve such clustering. A variance for lot width, depth, and other standard design requirements may be required.
- The first objective of these guidelines is to design the placement of proposed homesites, driveways, and roads in locations that completely avoid any oak trees and their protected zones following existing ordinances and general plan policies. When this is possible and implemented on a project, oak trees and their protected zones will be identified and protected through an Environmental Constraints Sheet. No further mitigation for impacts to oak trees is required. Conditions which may render this approach infeasible include, but are not limited to, oak tree coverage patterns, steep slopes, drainage constraints, road and access locations, septic system limitations, and other significant hazards, resource or public facility constraints.

http://www.rctlma.org/planning/content/devproc/guidelines/oak_trees/oak_trees.html[10/28/2011 9:38:31 AM]

- When avoidance of oak trees and their protected zones is not feasible without some variance from existing ordinances or general plan policies, designs that would concentrate proposed homesites, driveways and roads into clusters of as many units as feasible into a single area and unusual lot line configurations shall be used to completely avoid impacts to oak trees and their protected zones, where possible. However, the minimum lot size requirements of any applicable zoning or general plan polices must be followed. If required to avoid stands of oak trees, proposed roads may be placed within a parcel rather than along a lot line. In consideration of such design variances, the applicant must have negotiated a conservation easement with a conservation agency that will at least cover the protected zones of the oak trees on the property. The negotiated, unexecuted easement document and a map of the area to be covered by the easement must accompany the development application as exhibits at the time of project approval. The project approval will be subject to a condition requiring that prior to or with the recordation of a final map or prior to the issuance of a grading permit the easement must be executed in substantial conformance with these exhibits. The easement shall be identified on an Environmental Constraints Sheet.
- When encroachment into an oak tree protected zone or oak tree removal is the only available means of creating a homesite or its required access, the maximum area unconstrained by oak trees shall be used, unless precluded by other significant constraints such as steep slopes. Clustering of homesites into the fewest number of areas possible which take advantage of the portions of the property which are the least constrained by oaks and other constraints is strongly encouraged to minimize the spread of impacts over a large portion of the property and to reduce the fragmentation of the remaining natural areas. However, the minimum lot size requirements of any applicable zoning or general plan policies must be followed. In no case will a homesite(s) be permitted to exceed 10,000 square feet if the creation of that homesite will result in the violation of one or more oak tree's protected zone(s). The homesite(s) should be less than 10,000 square feet, down to the minimum feasible size if necessary in order to avoid direct impacts to oak woodlands. The minimum mitigation of the loss of oak trees under these circumstances must include a conservation easement negotiated between the applicant and a conservation agency that will at least cover the undisturbed portion of the protected zone of any oak tree on the property whose drip line is not violated. The negotiated, unexecuted easement document and a map of the area to be covered by the easement must accompany the development application as exhibits at the time of project approval. The project approval will be subject to a condition requiring that prior to or with the recordation of a final map or prior to the issuance of a grading permit the easement must be executed in substantial conformance with these exhibits. The easement shall be identified on an Environmental Constraints Sheet.
- Application of any clustering provisions shall be permitted only when it is determined that these provisions provide a net environmental benefit. In the event that clustering will not provide a net environmental benefit and impacts to oak trees or their protected zones cannot be avoided, a design that least impacts oak trees without clustering shall be prepared. The minimum mitigation required under these circumstances must include limiting the homesite size to a maximum of 10,000 square feet (smaller if necessary to avoid direct impacts to oak woodlands) and a conservation easement negotiated between the applicant and a conservation agency that will at least cover the undisturbed portion of the protected zone of any oak tree on the property whose drip line has not been violated. The negotiated, unexecuted easement document and a map of the area to be covered by the easement must accompany the development application as exhibits at the time of project approval. The project approval will be subject to a condition requiring that prior to or with the recordation of a final map or prior to the issuance of a grading permit the easement must be executed in substantial conformance with these exhibits. The easement shall be identified on an Environmental Constraints Sheet.
- The determination that a project design will significantly reduce the overall impact to oak trees has to be

Riverside County Oak Tree Management Guidelines

judged relative to the initial state of the site. Additionally, a variety of factors must be considered. Those factors, listed in general order of importance, include, but are not limited to:

a. The size and contiguity of the area covered by undisturbed oak tree protected zones

b. The size and of the trees whose protected zones are left undisturbed

c. The number of trees whose protected zones are left undisturbed

d. The size and contiguity of the area covered by oak tree protected zones that are proposed to be disturbed outside of the tree's drip line

e. The size of the trees in DBH whose protected zones re proposed to be disturbed outside of the tree's drip line

f. The number of trees whose protected zones are proposed to disturbed outside of the tree's drip line. So long as a homesite violates an oak tree's drip line, the impacts on that tree cannot be regarded as significantly reduced.

DESIGN PROVISIONS

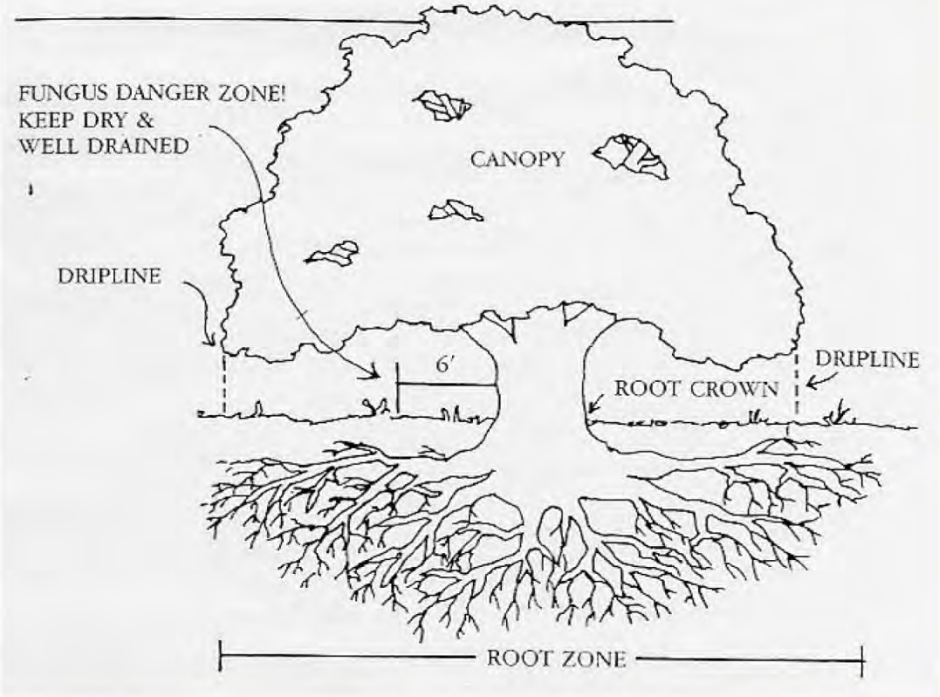
- No construction activities or placement of structures shall occur within the protected zone of any oak tree or oak woodland except as provided for in these policies.
- Landscaping, trenching or irrigation systems shall not be installed within the existing protected zone of any oak tree or oak woodland, unless recommended by a biologist.
- Land uses that would cause excessive soil compaction within the protected zone of any individual oak tree shall be avoided. No recreational trails are permitted within the drip line of any individual oak tree.
- Manufactured cut slopes shall not begin their downward cut within the protected zone of any individual oak tree, except as provided in these guidelines.
- Manufactured fill slopes shall not extend within the protected zone, except as provided in these guidelines.
- On-slope retaining structures, if required, shall be designed to protect the root system of any individual oak tree by preserving the natural grade within the protected zone.
- Redirection of surface runoff which results in increased soil moisture for an extended period of time within the drip line area of any individual oak tree shall be avoided. If unavoidable, a drainage system shall be designed to maintain the previous amount of soil moisture.
- Sedimentation and siltation shall be controlled to avoid filling around bases of oak trees.
- Redirection of surface runoff which results in decreased soil moisture for an extended period of time within the drip line area shall be avoided. If unavoidable, an irrigation system shall be designed to maintain the previous amount of soil moisture.
- A construction zone at the interface with a protected zone shall be clearly delineated on the site in order to avoid impacts from construction operations and also to prevent the storage or parking of equipment outside the construction zone.
- Dead or dying oak trees are necessary for the excavation of nest cavities by woodpeckers. Twelve species of birds use nest cavities. It is important to the health of the habitat to retain dead and dying trees that are not a hazard to humans. Such oak trees shall be retained in place unless determined to pose a health or safety hazard, in which case they shall be discarded at an approved on-site location identified by the consulting biologist for habitat enhancement.
- On-site to on-site or off-site to off-site relocation of oak trees will not constitute mitigation and is considered the same as removal for the purposes of these guidelines.

http://www.rctlma.org/planning/content/devproc/guidelines/oak_trees/oak_trees.html[10/28/2011 9:38:31 AM]

Riverside County Oak Tree Management Guidelines

- Replacement of oak trees with plantings of saplings or acorns is not required by these guidelines; however, replacement plantings may be used in addition to these guidelines when they are required by another agency or when it is determined to be biologically sound and appropriate to do so.
- Oak protection should be orientated toward protection of the life cycle of oak trees and oak woodland; i.e., young trees should be protected along with older trees.

Exhibits



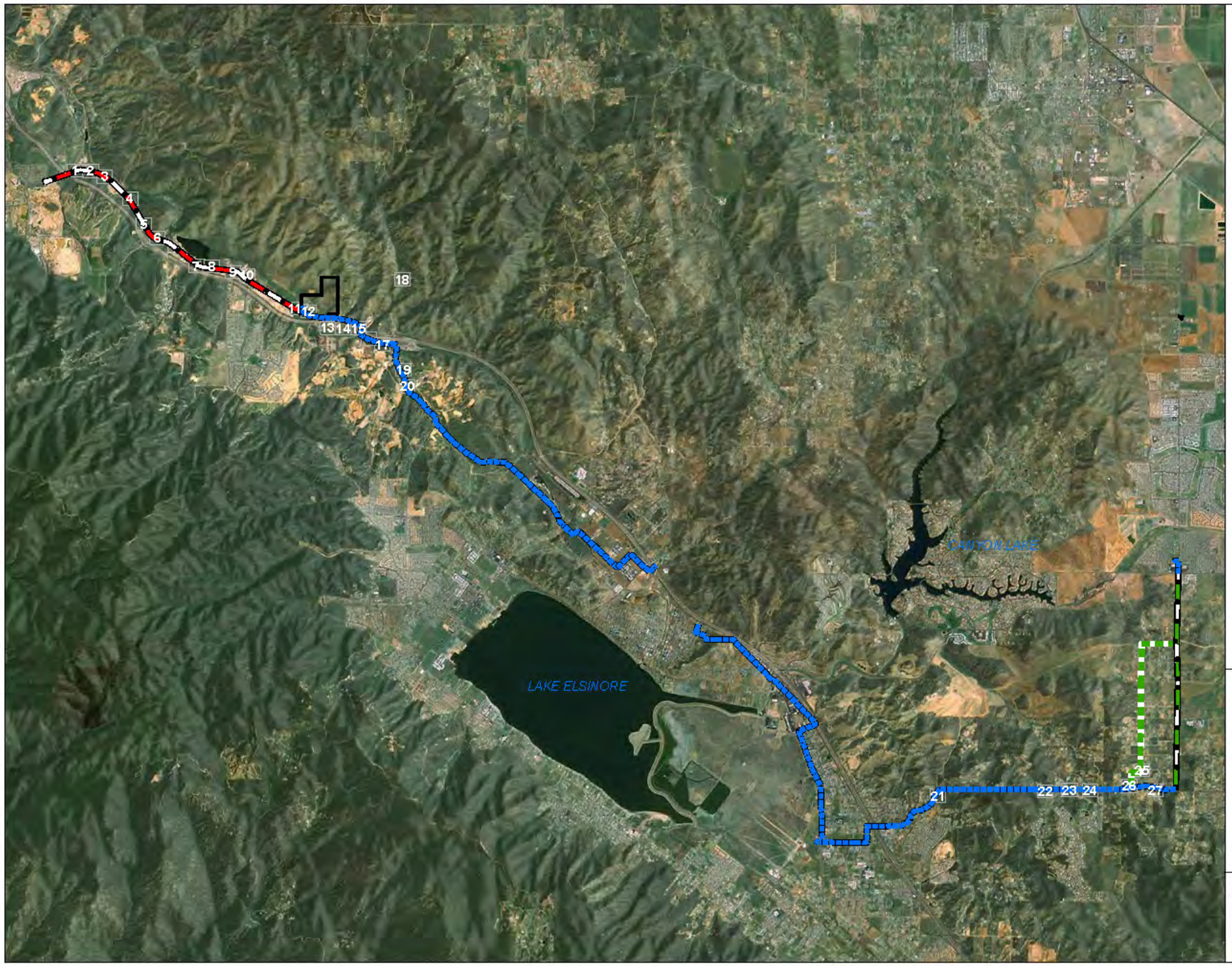
Last Revised: September 1999

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http://www.rctlma.org/planning/content/devproc/guidelines/oak_trees/oak_trees.html[10/28/2011 9:38:31 AM]

Appendix B

Tree Location Map



Legend

Project Data

- Anticipated Impact Area
- Double-circuit an existing single-circuit subtransmission line without Structure Replacement
- New single-circuit 115 kV sub T/L
- New single-circuit 115 kV sub T/L Alternative Segment
- Double-circuit an existing single-circuit subtransmission line with Structure Replacement

MAP NOTES

Data Source
Thomas Brothers Maps - Hydrography
SCE - Site Boundary and Transmission Data
TLMA- Burrowing Owl
(c) 2010 Microsoft Corporation Aerial Imagery

Projection
State Plane, California 406, NAD 83, Feet
Date: 3/22/2011

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3,500 1,750 0 3,500 Feet

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Project Vicinity

Alberhill System Project
Oak Tree Location Map
Riverside County, CA
Index Map

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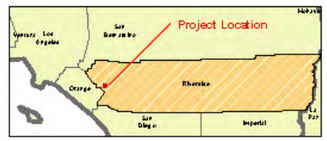


Legend:

Oak Survey Fall 2011
- Trunk
- Canopy

Alberhill System Project,
Proposed Project Components
- Anticipated Impact Area
- Existing Serrano-Valley 500 kV T/L Survey Area
- SA 500 kV T/L Survey Area
- VA 500 kV T/L Survey Area
- Pulling Point Disturbance Area
- Access Road
- Access Road Disturbance Area
- Proposed 500 kV T/L
- Existing Serrano-Valley 500 kV T/L
- Double-circuit an existing single-circuit sub transmission line without Structure Replacement
- New single-circuit 115 kV sub T/L
- New single-circuit 115 kV sub T/L Alternative Segment
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Note
kV = kilovolt
VA = Alternative 500kV VA Transmission Line
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MAP NOTES

N

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
Date: 12/29/2011

PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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Appendix B
Alberhill System Project
Oak Tree Location Map
Riverside County, CA

Page 1 of 27

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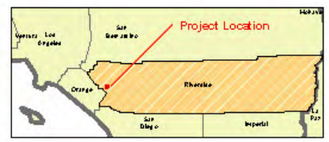


Legend:

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- Trunk
- Canopy

Alberhill System Project,
Proposed Project Components
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- Existing Serrano-Valley 500 kV T/L Survey Area
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Projection
State Plane, California 406, NAD 83, Feet
Date: 12/29/2011

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Appendix B
Alberhill System Project
Oak Tree Location Map
Riverside County, CA

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Legend:

Oak Survey Fall 2011
- Trunk
- Canopy

Alberhill System Project,
Proposed Project Components
- Anticipated Impact Area
- Existing Serrano-Valley 500 kV T/L Survey Area
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Riverside County, CA

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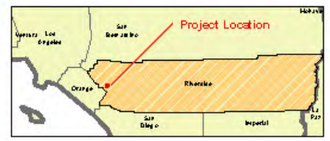


Legend:

Oak Survey Fall 2011
- Trunk
- Canopy

Alberhill System Project, Proposed Project Components
- Anticipated Impact Area
- Existing Serrano-Valley 500 kV T/L Survey Area
- SA 500 kV T/L Survey Area
- VA 500 kV T/L Survey Area
- Pulling Point Disturbance Area
- Access Road
- Access Road Disturbance Area
- Proposed 500 kV T/L
- Existing Serrano-Valley 500 kV T/L
- Double-circuit an existing single-circuit to transmission line without Structure Replacement
- New single-circuit 115 kV sub T/L
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Appendix B
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Oak Tree Location Map
Riverside County, CA

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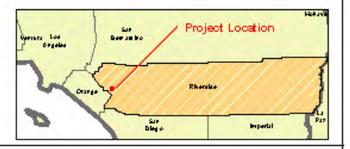


Legend:

Oak Survey Fall 2011
- Trunk
- Canopy

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- Anticipated Impact Area
- Existing Serrano-Valley 500 kV T/L Survey Area
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State Plane, California 406, NAD 83, Feet
Date: 12/29/2011

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100 50 0 100 Feet

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Appendix B
Alberhill System Project
Oak Tree Location Map
Riverside County, CA

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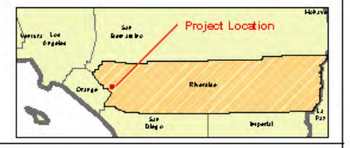


Legend:

Oak Survey Fall 2011
- Trunk
- Canopy

Alberhill System Project,
Proposed Project Components
- Anticipated Impact Area
- Existing Serrano-Valley 500 kV T/L Survey Area
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- VA 500 kV T/L Survey Area
- Pulling Point Disturbance Area
- Access Road
- Access Road Disturbance Area
- Proposed 500 kV T/L
- Existing Serrano-Valley 500 kV T/L
- Double-circuit an existing single-circuit 66 kV transmission line without Structure Replacement
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Riverside County, CA

Page 6 of 27

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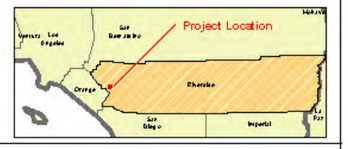


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Appendix B
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Oak Tree Location Map
Riverside County, CA

Page 7 of 27

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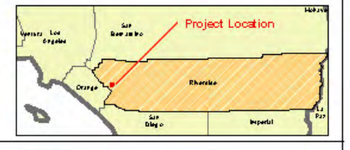


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MAP NOTES

Data Source
Thomas Brothers Maps - Roads, Hydrography
SCE - Site Boundary and Transmission Data
ESRI - Political Boundaries

Projection
State Plane, California 406, NAD 83, Feet
Date: 12/29/2011

PROTECTED MATERIALS - Contains Critical Energy Infrastructure Information.

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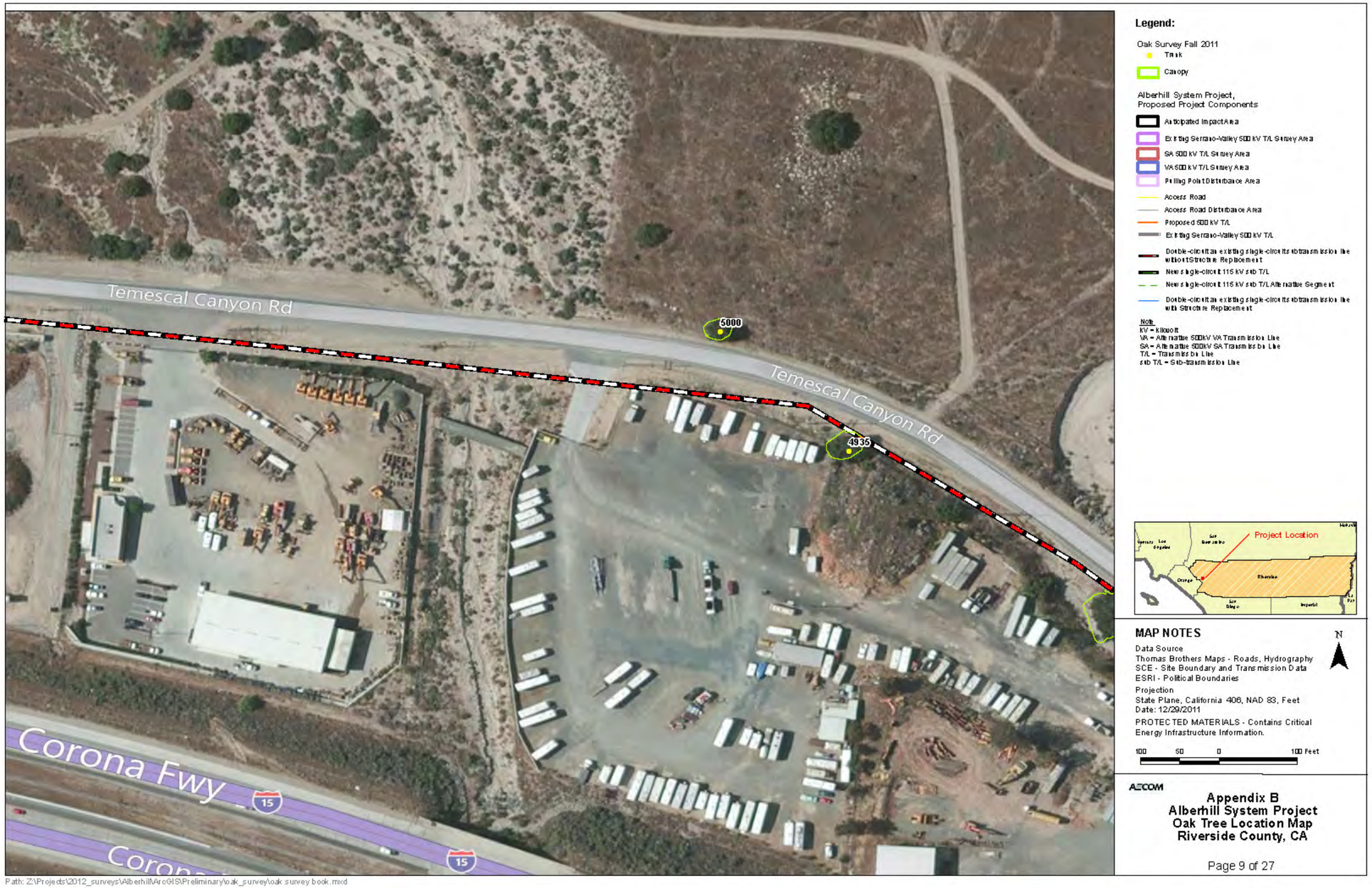
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Appendix B
Alberhill System Project
Oak Tree Location Map
Riverside County, CA

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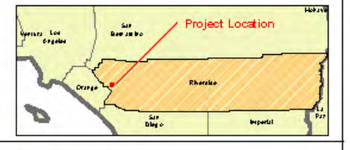


Legend:

Oak Survey Fall 2011
- Trunk
- Canopy

Alberhill System Project, Proposed Project Components
- Anticipated Impact Area
- Existing Serrano-Valley 500 kV T/L Survey Area
- SA 500 kV T/L Survey Area
- VA 500 kV T/L Survey Area
- Pulling Point Disturbance Area
- Access Road
- Access Road Disturbance Area
- Proposed 500 kV T/L
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- New single-circuit 115 kV sub T/L
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- Double-circuit an existing single-circuit sub transmission line with Structure Replacement

Note
kV = kilovolt
VA = Alternative 500kV VA Transmission Line
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Oak Tree Location Map
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Love Ln
Love Ln
Temescal Canyon Rd
Temescal Canyon Rd
86
87
4944
4941
4942
4939
4940
4943
Legend:
Oak Survey Fall 2011
Trunk
Canopy
Alberhill System Project,
Proposed Project Components
Anticipated Impact Area
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Oak Tree Location Map
Riverside County, CA
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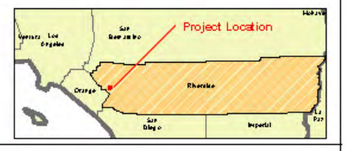


Legend:

Oak Survey Fall 2011
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Alberhill System Project,
Proposed Project Components
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Projection
State Plane, California 406, NAD 83, Feet
Date: 12/29/2011

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Appendix B
Alberhill System Project
Oak Tree Location Map
Riverside County, CA

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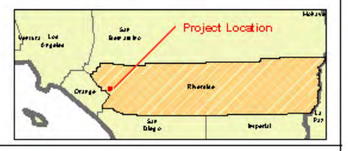


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Riverside County, CA

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Concordia Ranch Rd
Corona Fwy
Temescal Canyon Rd
4950
4951
4952
15
Legend:
Oak Survey Fall 2011
Trunk
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Riverside County, CA
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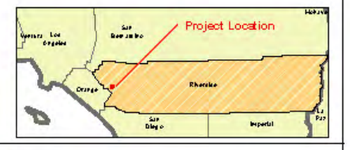


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Appendix B
Alberhill System Project
Oak Tree Location Map
Riverside County, CA

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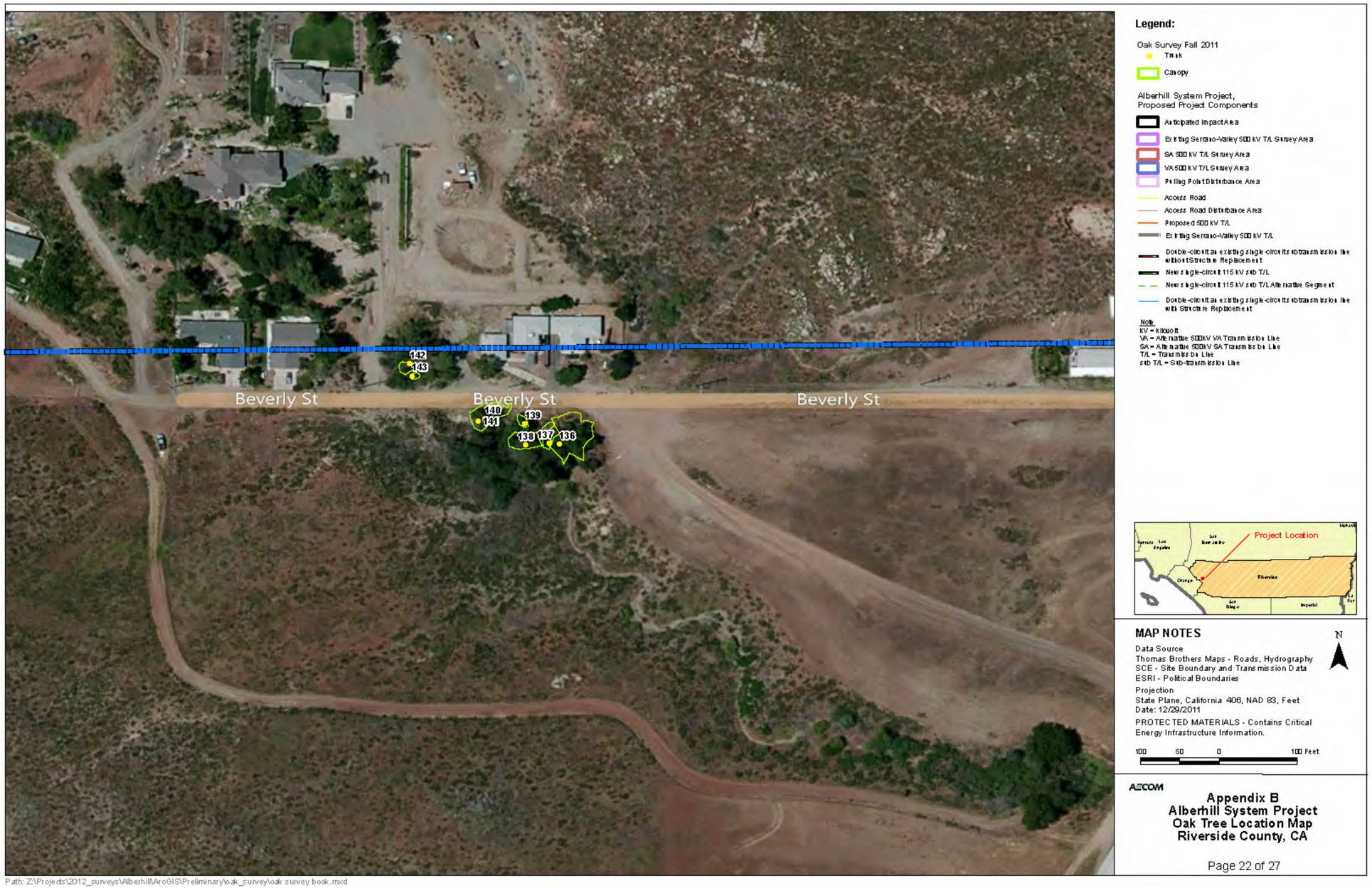
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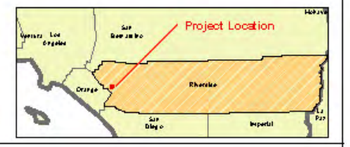


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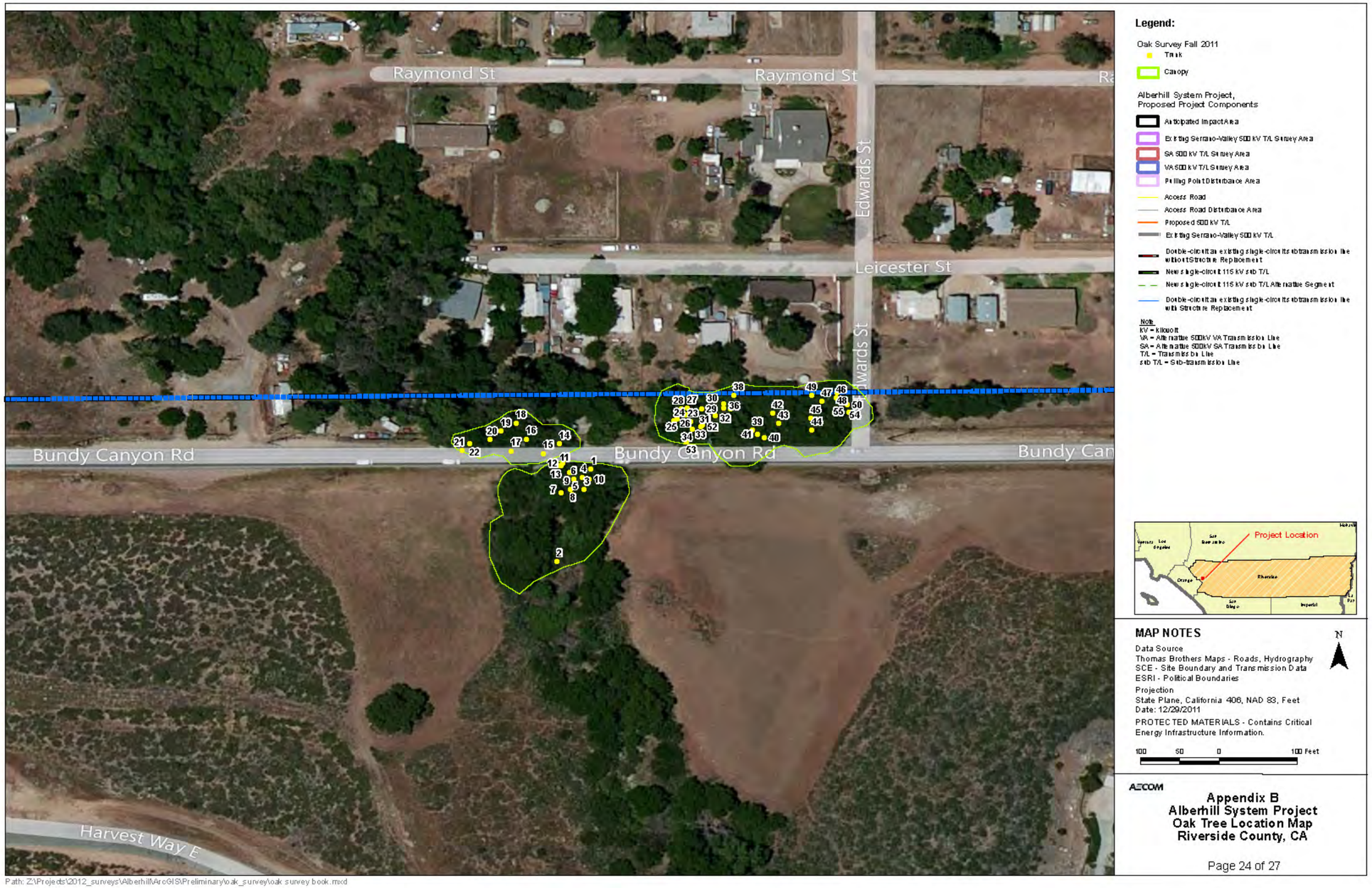
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Appendix B
Alberhill System Project
Oak Tree Location Map
Riverside County, CA

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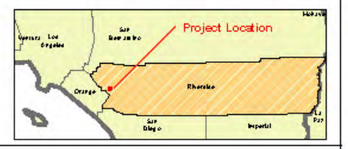


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Oak Tree Location Map
Riverside County, CA

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Appendix C

Summary of Oak Field Assessments

OAK FIELD EVALUATION

Tree Number: **1** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 10:50:00 AM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478984.09230000002 mE, 3722421.3289999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 14" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **2** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 11:10:00 AM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478972.91680000001 mE, 3722385.5129999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 11" Height (feet): 12
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
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Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	Severe	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **3** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 11:23:00 AM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478981.9423 mE, 3722413.3969999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 25" Height (feet): 25
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

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Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 11:37:00 AM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478981.3346 mE, 3722418.202 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 25"@4',18"@4' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **5** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 12:04:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478978.07429999998 mE, 3722411.557 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 11" Height (feet): 30
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **6** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 12:08:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478978.55099999998 mE, 3722417.469 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 25" Height (feet): 25
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Severe	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **7** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 4:02:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478974.36660000001 mE, 3722412.304 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 9" Height (feet): 10
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☐ normal ☒ small
Annual Shoot Growth: ☐ excellent ☐ average ☒ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	Severe	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	Low	Moderate	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **8** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 3:54:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478977.46049999999 mE, 3722413.591 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 15" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	Low	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Moderate	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **9** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 3:48:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478977.011 mE, 3722420.0600000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 11" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **10** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 3:42:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478983.4964 mE, 3722417.2740000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 7" Height (feet): 20
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **11** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 2:50:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478974.08020000003 mE, 3722422.6529999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 7" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Severe	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **12** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 2:33:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478975.00949999999 mE, 3722423.5750000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 12"@2',21"@2' Height (feet): 25
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 30 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Severe	Moderate	None
Cavity	None	Severe	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	Severe	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **13** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 2:24:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478974.38919999998 mE, 3722422.6519999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 19" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 45 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **14** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 4:13:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478973.94420000003 mE, 3722431.1540000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 34" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	Low	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	Moderate	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **15** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 4:21:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478968.68119999999 mE, 3722427.469 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 23" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	Low	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **16** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 11/18/2011 4:25:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478962.97470000002 mE, 3722433.0260000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☒ yes ☐ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **17** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 3:02:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478958.01880000002 mE, 3722428.4169999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 25" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **18** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 3:09:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478959.74280000001 mE, 3722439.3149999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 16" Height (feet): 35
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **19** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 3:17:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478954.94459999999 mE, 3722436.1850000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 15
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☐ average ☒ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Severe	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Low	None	None
Decay	None	Moderate	Moderate	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	Severe	Severe	Severe
Borers/termites	None	Moderate	Moderate	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **20** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 3:24:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478951.228 mE, 3722432.8670000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 21" Height (feet): 30
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	Moderate	Moderate	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	Low	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	Low	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **21** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 3:32:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478942.25439999998 mE, 3722428.6359999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 24" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	Low
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **22** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 3:42:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478944.73300000001 mE, 3722431.2179999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 21" Height (feet): 40
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	Moderate	None
Cavity	None	Moderate	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **23** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 4:06:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479016.66269999999 mE, 3722439.7969999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 16" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **24** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 4:11:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479011.21189999999 mE, 3722439.9419999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Moderate	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **25** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 4:21:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479012.14130000002 mE, 3722440.8640000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 11" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	Severe	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **26** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 4:26:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479015.08100000001 mE, 3722442.3360000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **27** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 4:31:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479015.55040000001 mE, 3722444.9219999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 10" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **28** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 4:34:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479013.54080000002 mE, 3722444.7409999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 13" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Low	Low
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **29** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 4:39:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479020.03169999999 mE, 3722444.5419999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 10
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Severe	Severe	None
Bow, Sweep	None	None	Severe	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Moderate	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	Moderate	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **30** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 10:30:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479022.85190000001 mE, 3722445.4040000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 30" Height (feet): 9
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Severe	Severe	None
Bow, Sweep	None	Severe	Severe	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	Low	Moderate	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	Severe	Severe	None

OAK FIELD EVALUATION

Tree Number: **31** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 10:52:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479023.12119999999 mE, 3722443.7960000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 11"@1', 5"@1', 15"@1' Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	Moderate	Moderate	None	None
Included Bark	Moderate	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **32** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 11:04:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479024.50819999998 mE, 3722441.9449999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 35" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Low	Low
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **33** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 11:10:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479019.86259999999 mE, 3722437.8900000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 14" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Severe	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **34** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 11:25:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479017.08679999999 mE, 3722436.9219999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 14" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Low	Low	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **35** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 11:49:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479027.29840000003 mE, 3722444.844 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **36** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 11:54:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479027.45529999997 mE, 3722446.7429999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **37** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:00:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479029.61469999998 mE, 3722444.7059999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **38** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:03:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479030.55330000003 mE, 3722449.878 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **39** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:10:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479036.7672 mE, 3722436.3659999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 31" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **40** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:18:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479040.56349999999 mE, 3722433.4100000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 11"@18", 7"@18" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **41** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:22:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479038.40259999997 mE, 3722434.7080000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 8"@1', 4"@1' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	Moderate	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **42** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:30:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479043.212 mE, 3722443.0129999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 26" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **43** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:37:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479045.21240000002 mE, 3722438.9440000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 10" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **44** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:42:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479056.0257 mE, 3722436.3330000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 32" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Severe	Severe	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Moderate
Borers/termites	None	Moderate	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **45** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 12:53:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479055.57209999999 mE, 3722440.9539999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 46" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☒ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	Moderate	Moderate	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Low
Borers/termites	Severe	Moderate	None	None
Cankers/galls/burls	None	Moderate	None	None

OAK FIELD EVALUATION

Tree Number: **46** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 1:00:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479063.93560000003 mE, 3722448.8810000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 14" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Severe	None
Bow, Sweep	None	Moderate	Moderate	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **47** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 1:06:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479059.29599999997 mE, 3722447.5980000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 10" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **48** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 1:14:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479064.24910000002 mE, 3722450.9130000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 18" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **49** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 1:20:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479055.90059999999 mE, 3722449.8229999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **50** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 2:52:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479067.57510000002 mE, 3722446.0860000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 25" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Low	None	None	None
Decay	None	None	None	None
Cavity	Low	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **52** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 11:35:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479020.32750000001 mE, 3722438.4440000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 9"@2', 9"@2' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **53** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 11:42:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479015.21299999999 mE, 3722431.9870000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	Low	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **54** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 3:02:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479070.15759999998 mE, 3722445.2790000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 11" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Moderate	None
Bow, Sweep	None	None	Moderate	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **55** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 3:04:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479067.9952 mE, 3722443.3480000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 11" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **56** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 1:51:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478500.38050000003 mE, 3722431.8339999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 5"@2', 4"@2' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **57** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 2:02:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478506.71730000002 mE, 3722431.8199999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 5"@3', 4"@3' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **58** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 2:09:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478507.5037 mE, 3722437.9160000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 25"@2', 15"@2', 19"@2' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	Moderate	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **59** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 2:14:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478518.77610000002 mE, 3722433.2710000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 13"@2', 7"@2' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **60** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 2:20:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478519.08270000003 mE, 3722432.162 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 6"@2', 4"@2' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **61** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/23/2011 2:26:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478521.86969999998 mE, 3722434.3730000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 10"@8', 5"@8', 4"@8' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **62** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 9:28:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463672.88280000002 mE, 3731611.7390000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **63** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 9:33:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463659.65409999999 mE, 3731687.1490000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 32" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	Moderate	Moderate	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **64** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 9:40:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463668.52130000002 mE, 3731663.8309999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 36" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **65** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 9:45:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463679.08279999997 mE, 3731632.531 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 15"@3', 12"@3' Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **66** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 9:53:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463697.1827 mE, 3731607.5449999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 23" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **67** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 10:03:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463754.6888 mE, 3731502.3650000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 32" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **68** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 10:21:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463802.60889999999 mE, 3731312.031 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 2"@8", 5"@8" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Moderate	Moderate	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **69** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 10:31:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463869.13030000002 mE, 3731139.923 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 25"@3', 18"@3' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	Severe	None	None
Included Bark	None	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	Moderate	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	Severe	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	Severe	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **70** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 11:30:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456353.51630000002 mE, 3735922.5419999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 62" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Low	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	Low	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	Low
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **71** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 11:47:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456376.87589999998 mE, 3735934.2629999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 27" Height (feet): 30
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Severe	Severe	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	Severe	Severe	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **72** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 11:56:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456466.19410000002 mE, 3735965.432 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 12"@4', 8"@4', 10"@4' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	Low	Low	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **73** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 12:07:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456496.37229999999 mE, 3735975.4270000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 42" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	Low	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **74** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 12:21:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456540.85629999998 mE, 3735983.2590000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 9"@2', 12"@2' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Low	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Severe	Severe	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	Severe	Severe	Severe	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **75** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 12:27:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456546.40590000001 mE, 3735984.8969999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 23" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	Severe	Severe	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **76** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 12:45:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456589.88209999999 mE, 3735987.4419999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 32" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	Moderate	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	Moderate	Moderate	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **77** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 1:00:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456894.02289999998 mE, 3735944.5329999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 9 dbH (inches): 5"@3', 6"@3', 5"@3', 5"@3', 5"@3', 5"@3', 5"@3', 5"@3', 5"@3' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **78** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 1:13:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456983.51179999998 mE, 3735913.094 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Moderate	None	None
Decay	None	Severe	None	None
Cavity	None	Severe	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **79** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 1:17:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457039.15820000001 mE, 3735885.9240000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 21" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **80** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 2:06:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457673.35560000001 mE, 3735338.375 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 29" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	None	None
Cavity	None	Moderate	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	Moderate	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **81** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 2:11:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457677.23729999998 mE, 3735343.5320000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	None	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **82** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 2:18:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457671.7218 mE, 3735349.949 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 26" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **83** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 2:34:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457957.39809999999 mE, 3734894.1060000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 26" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **84** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 2:45:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458055.08260000002 mE, 3734711.7629999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 25"@5', 12"@5' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **85** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 3:04:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458342.72080000001 mE, 3734473.1779999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 32"@2', 18"@2' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Moderate	Moderate	None	None
Cavity	Severe	Severe	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	None	None
Deadwood Stubs	None	Moderate	Severe	Severe
Borers/termites	Severe	Severe	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **86** Inspector: Thomas Juhasz
Site/Address: Alberhill Substation Date: 10/18/2011 1:39:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461678.3101 mE, 3732939.4989999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 5"@2', 4"@2', 5"@2', 3"@2" Height (feet): 14
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☒ yes ☐ no
Leaf Size: ☐ normal ☒ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **87** Inspector: Thomas Juhasz
Site/Address: Alberhill Substation Date: 10/18/2011 2:03:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Removal
NAD83 UTM Coordinates: 461666.70919999998 mE, 3732921.9470000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	Low
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	Low
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Low	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Moderate	Low	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **88** Inspector: Thomas Juhasz
Site/Address: 500kv Alberbill Date: 10/18/2011 2:46:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Removal
NAD83 UTM Coordinates: 463713.67700000003 mE, 3733521.094 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 4 dbH (inches): 19"@3', 26"@3' Height (feet): 16
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Low	Low	None	None
Bow, Sweep	None	Low	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	Moderate	None	Low	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Moderate	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **89** Inspector: Thomas Juhasz
Site/Address: 500kv Alberhill Date: 10/18/2011 3:39:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463663.4595 mE, 3733684.2390000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 18"@3, 16" @3' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	Moderate	Moderate	None
Included Bark	None	Moderate	Moderate	None
Excessive End Weight	None	Low	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	Low	None	None

OAK FIELD EVALUATION

Tree Number: **90** Inspector: Thomas Juhasz
Site/Address: Byers Road Date: 10/18/2011 5:04:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480083.91210000002 mE, 3722848.5070000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 9 dbH (inches): 6"@1',6"@1,5"@1',6"@1',6"@1',6"@1',6"@1',3"@1',7"@1' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Low	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Severe	Severe	None	None
Multiple Attachments	Severe	Severe	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **91** Inspector: Thomas Juhasz
Site/Address: Byers Road Date: 10/18/2011 5:20:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480083.95640000002 mE, 3722853.7000000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 2"@8",7"@8",6"@8" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Low	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Moderate	Moderate	None	None
Multiple Attachments	Moderate	Moderate	None	None
Included Bark	Moderate	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Low	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **92** Inspector: Thomas Juhasz
Site/Address: Byers Road Date: 10/18/2011 5:31:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480083.91360000003 mE, 3722845.523 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 3"@ 0', 3"@ 0' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	None	None
Bow, Sweep	None	Low	None	None
Codominants, Forks	Low	Moderate	None	None
Multiple Attachments	Low	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **93** Inspector: Thomas Juhasz
Site/Address: Byers Road Date: 10/18/2011 5:39:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480085.66190000001 mE, 3722843.9610000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 5" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 30 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Moderate	Moderate	Low	None
Bow, Sweep	Moderate	Moderate	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Moderate	Moderate	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **94** Inspector: Thomas Juhasz
Site/Address: Byers Road Date: 10/18/2011 5:56:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480088.65999999997 mE, 3722845.0759999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 7 dbH (inches): 6"@2', 5"@2', 3"@2', 6"@2', 3"@2', 6"@2', 5"@ 2' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	Moderate	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Moderate	Moderate	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **95** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 12:12:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456405.39449999999 mE, 3735917.9330000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 38" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Low	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	Low	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	None	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	Low	None	None

OAK FIELD EVALUATION

Tree Number: **96** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 1:00:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456487.51750000002 mE, 3735947.9070000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 29" Height (feet): 55
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	Low	None	None
Codominants, Forks	None	None	Low	None
Multiple Attachments	None	None	Low	None
Included Bark	None	None	Low	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	None	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	Moderate	None
Cankers/galls/burls	None	Moderate	Moderate	Low

OAK FIELD EVALUATION

Tree Number: **97** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 1:08:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456518.56689999998 mE, 3735955.2609999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 28" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☒ yes ☐ no
Restricted Root Area: ☐ severe ☒ moderate ☐ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☒ yes ☐ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	Low	None	None
Codominants, Forks	None	None	Low	None
Multiple Attachments	None	None	Moderate	None
Included Bark	None	None	Low	None
Excessive End Weight	None	None	None	None
Cracks/Splits	Moderate	Moderate	Moderate	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	Severe	Moderate	None	None
Decay	Moderate	Low	Low	None
Cavity	Moderate	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Severe	Severe	Moderate	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	Moderate	Moderate	Moderate	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **98** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 2:09:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456546.01240000001 mE, 3735962.5040000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 32" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	Low	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Low	Severe	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Moderate	None	None
Decay	None	Moderate	Moderate	None
Cavity	None	Moderate	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	None	None
Deadwood Stubs	None	Moderate	Severe	Moderate
Borers/termites	None	Moderate	Moderate	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **99** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 2:32:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456588.4731 mE, 3735966.0070000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 28" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	Severe	None
Cavity	None	Low	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	Moderate	None	None
Loose/Cracked Bark	Severe	Severe	Severe	None
Deadwood Stubs	Low	None	None	Moderate
Borers/termites	None	None	Severe	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **104** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 2:49:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456599.59490000003 mE, 3735967.9890000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 13"@1',14"@1' Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☒ yes ☐ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	Moderate	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Moderate	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	Moderate	None
Cavity	None	None	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **105** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 3:15:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456651.62150000001 mE, 3735965.7510000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	Low	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Low	Low	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Low	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **106** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/19/2011 3:41:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456663.77740000002 mE, 3735962.523 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 34" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Low	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	Low	None
Cavity	None	Low	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **107** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 12/16/2011 5:01:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456694.0379 mE, 3735955.4500000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 55
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	Low	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	Low	None
Decay	None	Moderate	Low	None
Cavity	None	Low	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Low	Moderate	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **108** Inspector: Thomas Juhasz
Site/Address: Waldon road Date: 10/19/2011 2:49:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479884.60830000002 mE, 3722586.3339999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): no access (over 2") Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☒ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **109** Inspector: Thomas Juhasz
Site/Address: Waldon road Date: 10/20/2011 2:49:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479882.21269999997 mE, 3722568.2650000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): no access (over 2") Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☒ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **110** Inspector: Thomas Juhasz
Site/Address: Waldon road Date: 10/21/2011 2:49:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 479875.65500000003 mE, 3722549.5419999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 5"@3', 5"@3' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☒ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **111** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 11:34:00 AM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480497.40169999999 mE, 3722422.3909999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 21"@3',16"@3' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☒ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Severe	Severe	None	None
Multiple Attachments	Severe	Severe	None	None
Included Bark	Severe	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	Low	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **112** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 11:53:00 AM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480499.08020000003 mE, 3722415.0649999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 10" Height (feet): 25
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **113** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 12:19:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480503.049 mE, 3722410.227 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 13" Height (feet): 18
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Moderate	Moderate	Moderate
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Low	None	None
Decay	Low	None	None	None
Cavity	Low	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Severe	Severe
Deadwood Stubs	None	None	Severe	Severe
Borers/termites	None	None	Low	Low
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **115** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 12:33:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480502.38260000001 mE, 3722406.8530000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Other trees

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Moderate	Moderate	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Low	None	None	None
Decay	Low	None	None	None
Cavity	Low	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	Moderate	Severe	Severe
Borers/termites	None	None	Low	Severe
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **116** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 12:46:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480499.23080000002 mE, 3722409.8220000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 16" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Severe	None
Multiple Attachments	None	None	Severe	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **117** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 1:05:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480507.59600000002 mE, 3722419.2289999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 15"@2', 20"@2' Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	Low	None	None
Included Bark	None	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	Moderate	Moderate	Moderate	None
Cankers/galls/burls	None	None	Low	Low

OAK FIELD EVALUATION

Tree Number: **118** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 1:20:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480512.73180000001 mE, 3722417.571 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 23"@1', 16"@1' Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Severe	None	None	None
Cavity	Severe	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	Severe	None	None	Low

OAK FIELD EVALUATION

Tree Number: **119** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 1:32:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480517.79759999999 mE, 3722412.9950000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 8" Height (feet): 16
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **120** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 2:03:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480526.44400000002 mE, 3722418.5419999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 16" Height (feet): 30
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Low	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **121** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 2:27:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480529.23969999998 mE, 3722421.9569999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 35"@6', 9"@6' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Severe	None
Multiple Attachments	None	None	Severe	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	Low	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **123** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 2:45:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480534.78460000001 mE, 3722412.5210000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 4 dbH (inches): 16"@2', 14"@2', 17"@2', 15"@2' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☒ moderate ☐ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☒ moderate ☐ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Severe	None	None	None
Multiple Attachments	Moderate	None	None	None
Included Bark	Moderate	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Low	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **124** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 3:11:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480359.19679999998 mE, 3722483.0989999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 8"@2' / 5"@2' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Moderate	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **125** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 10/20/2011 3:31:00 PM
Site Ownership: ☐ public ☐ private ☒ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 480342.01530000003 mE, 3722470.568 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 20"@13' / 19"@13' Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **126** Inspector: Thomas Juhasz
Site/Address: Lemon Street Date: 10/21/2011 9:15:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475577.48300000001 mE, 3722291.1860000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 18" Height (feet): 35
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	Moderate	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Low	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	Low	None
Cavity	None	Low	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **127** Inspector: Thomas Juhasz
Site/Address: Lemon Street Date: 10/21/2011 9:35:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475551.28000000003 mE, 3722258.915 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 54" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Low	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	Low	None
Cavity	None	Low	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **128** Inspector: Thomas Juhasz
Site/Address: Lemon Street Date: 10/21/2011 9:48:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475563.03509999998 mE, 3722262.2110000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): approx 40" [no access] Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	Moderate
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	Low	None
Cavity	None	None	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Low	Low	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **129** Inspector: Thomas Juhasz
Site/Address: Lemon Street Date: 10/21/2011 10:02:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475566.62949999998 mE, 3722277.7239999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): approx 20" [no access] point taken at fenceline 15 Height (feet): 40
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 25 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Low	None	None
Deadwood Stubs	None	Low	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **130** Inspector: Thomas Juhasz
Site/Address: Lost Road Date: 10/21/2011 10:13:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475565.89490000001 mE, 3722272.4730000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): approx 10" [no access] point taken at fenceline 15 Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 30 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Severe	None	None
Bow, Sweep	None	Severe	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **131** Inspector: Thomas Juhasz
Site/Address: Lost Road Date: 10/21/2011 10:25:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475554.80290000001 mE, 3722246.3399999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): approx 40" [no access] point taken at fenceline 15 Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Severe	None	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	None	None
Cavity	None	Severe	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	None	None
Deadwood Stubs	None	Moderate	Severe	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **132** Inspector: Thomas Juhasz
Site/Address: Lost Road Date: 10/21/2011 10:36:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475542.38199999998 mE, 3722224.3820000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 22" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☒ curb/pavement ☐ guards ☒ other: Culvert/fence

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **133** Inspector: Thomas Juhasz
Site/Address: Lost Road Date: 10/21/2011 10:48:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475562.79979999998 mE, 3722291.2230000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): approx 15" (NO ACCES, point collected 10 feet ds) Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **134** Inspector: Thomas Juhasz
Site/Address: Lost Road Date: 10/21/2011 11:05:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475620.18229999999 mE, 3722307.1540000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 22"@ 1', 19"@ 1' Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☒ moderate ☐ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	Low	None	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **135** Inspector: Thomas Juhasz
Site/Address: Lost Road Date: 10/21/2011 11:15:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 475660.85499999998 mE, 3722341.8429999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 20"@ 2', 18"@ 2' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Moderate	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **136** Inspector: Thomas Juhasz
Site/Address: Lost Road Date: 10/21/2011 11:57:00 AM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477987.34139999998 mE, 3722405.0950000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 23"@1',24"@1',29"@1' Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☒ yes ☐ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☒ yes ☐ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Severe	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Severe	None	Moderate	None
Decay	Severe	None	Moderate	None
Cavity	Severe	None	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Severe	Severe	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	Moderate	Moderate	Moderate	None

OAK FIELD EVALUATION

Tree Number: **137** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 12:10:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477983.94199999998 mE, 3722405.4720000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 28" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Severe	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	Moderate	None
Decay	None	Low	Moderate	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	Moderate	None

OAK FIELD EVALUATION

Tree Number: **138** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 12:25:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477976.35820000002 mE, 3722404.858 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 30" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☒ yes ☐ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Low	None	None	None
Decay	Low	Low	Low	None
Cavity	None	Low	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **139** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 12:29:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477976.13760000002 mE, 3722413.1639999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 12
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **140** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 12:45:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477963.09879999998 mE, 3722415.1290000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 11" Height (feet): 15
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	Severe	Severe	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Moderate	Moderate	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Severe	Severe	None	None
Deadwood Stubs	None	None	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **141** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 12:52:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477960.77789999999 mE, 3722414.0260000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 14" Height (feet): 25
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Severe	None	None
Decay	None	Severe	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Severe	None	None
Deadwood Stubs	None	Severe	Low	Moderate
Borers/termites	None	Moderate	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **142** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 1:04:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477938.728 mE, 3722436.6200000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 6" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **143** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 1:10:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 477939.33519999997 mE, 3722431.8149999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 5" Height (feet): 10
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Moderate	Moderate	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **144** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 1:39:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478528.0061 mE, 3722413.8480000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 28" at 0', 23"@1',24"@1' Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Moderate	Moderate	None	None
Multiple Attachments	Moderate	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Moderate	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **145** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 1:49:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478513.94549999997 mE, 3722415.727 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 33" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Low	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	Moderate	None
Cavity	None	Moderate	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	Low	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	Low	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **146** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 2:20:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478518.11109999998 mE, 3722412.392 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 6" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **147** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 2:09:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478515.17290000001 mE, 3722411.659 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 5" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **148** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 2:22:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478515.63809999998 mE, 3722412.3969999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 5"@1', 2"@1' Height (feet): 10
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **149** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 2:44:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478483.22499999998 mE, 3722432.057 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 5"@3', 3"@3' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **150** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 2:53:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478486.16499999998 mE, 3722433.5290000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **151** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 2:56:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478484.9314 mE, 3722434.8250000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 11" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **152** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 2:58:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478484.46980000002 mE, 3722435.75 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 6"@6", 7"@6" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **153** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:02:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478488.03039999999 mE, 3722438.3289999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	Severe	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **154** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:08:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478488.49119999999 mE, 3722437.0350000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 3" Height (feet): 11
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **155** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:11:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478488.95409999997 mE, 3722436.6639999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **156** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:33:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478493.58039999998 mE, 3722432.034 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 4" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **157** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:37:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478494.04570000002 mE, 3722432.7719999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 3" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **158** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:41:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478496.97940000001 mE, 3722431.4720000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 5" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **159** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:47:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478496.7928 mE, 3722430.7489999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 5" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **160** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:49:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478498.37209999998 mE, 3722432.2080000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 4"@0', 3"@0' Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **161** Inspector: Thomas Juhasz
Site/Address: Bundy Canyon Road Date: 10/21/2011 3:54:00 PM
Site Ownership: ☐ public ☒ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 478499.14730000001 mE, 3722433.3149999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 5" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **162** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 2:39:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456723.14939999999 mE, 3735951.3509999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 32" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	Low	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Low	Moderate	None	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	Low	Moderate	None	None
Loose/Cracked Bark	Moderate	Moderate	Low	None
Deadwood Stubs	Low	Low	Low	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **163** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 2:32:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456753.52120000002 mE, 3735943.8220000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 36" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **164** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 2:22:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456783.76630000002 mE, 3735942.3909999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 27" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☒ yes ☐ no
Restricted Root Area: ☐ severe ☐ moderate ☐ low ☒ none
Potential for Root Failure: ☐ severe ☐ moderate ☐ low ☒ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	None	None
Deadwood Stubs	Moderate	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **165** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 2:09:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456812.29119999998 mE, 3735935.9789999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 27" Height (feet): 50
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Severe	None	None
Cavity	None	Severe	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	Moderate	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **166** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 1:58:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456842.42430000001 mE, 3735929.2930000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 24" Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☐ low ☒ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	None	None
Cavity	None	Moderate	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Low	None	Low	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	Severe	Severe	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **167** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 1:37:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 456875.51949999999 mE, 3735924.236 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 13"@3', 9"@3' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Severe	Severe	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	Severe	None
Cavity	None	Moderate	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Severe	Moderate	None
Deadwood Stubs	None	Severe	Severe	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **168** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 1:21:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457011.57860000001 mE, 3735873.5440000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 27"@3', 14"@3' Height (feet): 40
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	Moderate	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Severe	None
Hangers	None	None	Low	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Moderate	Severe	None	None
Cavity	Low	Severe	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	Moderate	None
Deadwood Stubs	None	None	Severe	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **169** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 1:10:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457040.62969999999 mE, 3735858.5669999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 11"@3', 10"@3' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Severe	Moderate	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **170** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 1:01:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457095.19929999998 mE, 3735831.5869999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 30" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☒ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	None	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	Low	None	None
Loose/Cracked Bark	None	Moderate	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **171** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 3:10:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457121.72379999998 mE, 3735815.9739999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 8"@2', 7"@2' Height (feet): 20
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Moderate	None	None	None
Cavity	Moderate	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Low	Low	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **172** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 3:19:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457116.86129999999 mE, 3735813.4619999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 12" Height (feet): 20
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	Moderate	None
Excessive End Weight	None	None	Moderate	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Severe	Severe	Low	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **173** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 3:31:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457145.67709999997 mE, 3735798.6519999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 21" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Severe	None	None
Cavity	None	Severe	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **174** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 3:39:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457172.51179999998 mE, 3735783.3220000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 18" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Low	Moderate	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **175** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 3:49:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457195.87439999997 mE, 3735766.6140000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 14"@4', 10"@4', 10"@4' Height (feet): 16
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Low	Low
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Low	Moderate	Severe	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **176** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 3:57:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457220.00829999999 mE, 3735749.9019999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 14" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	Moderate	Low	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	Low	Low	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **177** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/3/2011 4:05:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457243.08390000003 mE, 3735732.7969999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 14"@3', 9"@3' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Severe	Severe	None
Deadwood Stubs	None	None	Moderate	Severe
Borers/termites	None	Low	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **178** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 9:23:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457538.24449999997 mE, 3735465.7439999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 19" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Moderate	Moderate	None
Decay	None	Low	Low	None
Cavity	None	Low	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Severe	Severe	None
Deadwood Stubs	None	Moderate	Moderate	None
Borers/termites	None	None	None	Moderate
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **179** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 9:39:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457561.91249999998 mE, 3735442.7250000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 12" Height (feet): 15
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☐ average ☒ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Severe	Severe	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Moderate	Moderate	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Moderate	None	None
Decay	None	Moderate	Moderate	None
Cavity	None	Moderate	Low	None
Conks/Mushrooms	None	Moderate	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Severe	Severe	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **180** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 9:51:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457635.1249 mE, 3735350.8939999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 25" Height (feet): 25
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Severe	None	None
Bow, Sweep	None	None	Severe	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Moderate	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Low	Low	None	None
Cavity	Low	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	Moderate	None	None
Loose/Cracked Bark	Severe	Severe	Severe	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **181** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 10:05:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457635.68729999999 mE, 3735337.0639999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 45" Height (feet): 60
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	Severe	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Moderate	Low	None	None
Cavity	Moderate	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **182** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 10:15:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457643.88589999999 mE, 3735341.0929999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 19" Height (feet): 30
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Low	Low	None
Decay	None	Low	Low	None
Cavity	None	Low	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Severe	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **183** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 10:25:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457643.87359999999 mE, 3735338.321 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 12" Height (feet): 30
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Low	None	None	None
Bow, Sweep	None	Moderate	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	Low	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Low	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Low	Moderate	Moderate	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **184** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 10:38:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457644.04690000002 mE, 3735342.5699999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 28" Height (feet): 25
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Low	Moderate	Moderate	Moderate
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **185** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 10:46:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457643.56329999998 mE, 3735337.9530000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 25" Height (feet): 40
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	None	Severe	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **186** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 10:57:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457659.91239999997 mE, 3735325.4959999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 14" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	Moderate	Moderate	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **187** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 11:09:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457668.00719999999 mE, 3735320.1129999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 14"@2', 12"@2' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	Severe	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **188** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 11:21:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457690.69130000001 mE, 3735279.5329999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 6"@2', 5"@2', 4"@2' Height (feet): 10
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Low	None
Multiple Attachments	None	Low	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **189** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 11:39:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457726.19420000003 mE, 3735210.0780000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **190** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 11:53:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457923.14120000001 mE, 3734892.0989999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 17"@1', 15"@1' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	Moderate	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **191** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 12:28:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 457998.53210000001 mE, 3734765.9219999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 49" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **192** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 12:36:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458012.92580000003 mE, 3734739.4330000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 28" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	Moderate	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **193** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 12:45:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458030.87479999999 mE, 3734714.037 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 28" Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	Severe	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **194** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 12:52:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458045.11190000002 mE, 3734686.9950000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 21" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	Low	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **195** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 1:04:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458063.67690000002 mE, 3734661.227 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 8 dbH (inches): 8"@2', 11"@2', 10"@2', 7"@2', 10"@2', 12"@2', 12"@2', 7"@2' Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	Moderate	Moderate	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	Moderate	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Severe	Severe	Severe	None
Deadwood Stubs	None	None	Moderate	Low
Borers/termites	None	Severe	Severe	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **196** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 1:25:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458122.14669999998 mE, 3734545.9130000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 14"@2', 19"@2' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **197** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 1:36:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458131.54749999999 mE, 3734542.3599999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 25" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **198** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 1:44:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458146.3284 mE, 3734533.6099999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	Low	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	Severe	Severe	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **199** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 1:51:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458149.67340000003 mE, 3734523.9789999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 14"@3', 17"@3', 20"@3' Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	Severe	None
Multiple Attachments	None	Severe	Severe	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **200** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 1:58:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458162.2844 mE, 3734511.1800000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 29" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	Severe	None
Multiple Attachments	None	Severe	Severe	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4925** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 2:05:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458191.22970000003 mE, 3734493.8670000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 44" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	Moderate	None
Multiple Attachments	None	None	Moderate	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4926** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 2:34:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 459195.72730000003 mE, 3733878.892 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 6"@2', 8"@2', 10"@2', 5"@1' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **4927** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 2:43:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 459193.34830000001 mE, 3733875.5950000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 13"@2', 9"@2' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	Low	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4928** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 4:26:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 459181.34159999999 mE, 3733881.0430000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 5
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 45 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Moderate

OAK FIELD EVALUATION

Tree Number: **4929** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 4:18:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 459469.3481 mE, 3733825.9219999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4930** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 4:08:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 459499.04930000001 mE, 3733826.8229999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 13" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4931** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 4:02:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 459502.66190000001 mE, 3733818.389 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 41" Height (feet): 18
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4932** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/10/2011 3:33:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460147.65830000001 mE, 3733675.4810000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 41" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☒ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	Low	None	None
Included Bark	None	Moderate	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Moderate	Moderate	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	Severe	Severe	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4933** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 10:05:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460237.94890000002 mE, 3733596.0129999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 5 dbH (inches): 18"@3', 4"@3', 10"@3', 7"@3', 12"@3' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	Moderate	Moderate	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4934** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 10:15:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460290.59600000002 mE, 3733559.574 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 31" Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	Moderate	None
Cavity	None	Low	Moderate	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	Moderate	Moderate	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4935** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 9:41:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460058.37560000003 mE, 3733737.2050000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 19"@2', 15"@2' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4936** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 11:13:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461219.72289999999 mE, 3733002.4849999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 6" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4937** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 11:26:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461439.90289999999 mE, 3732878.2059999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 13"@3', 15"@3' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	Moderate	None	None
Loose/Cracked Bark	None	Low	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	Moderate	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4938**
Site/Address: Temescal Canyon Road
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other:
NAD83 UTM Coordinates: 461446.2635 mE, 3732874.6150000002 mN

Inspector: Thomas Juhasz
Date: 11/11/2011 11:50:00 AM
Impact: Encroachment

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 18" Height (feet): 35
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☒ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	Severe	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	Moderate	Moderate	None	None
Loose/Cracked Bark	Low	Low	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4939** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 12:02:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461468.20159999997 mE, 3732860.4240000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 10" Height (feet): 25
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4940** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 12:08:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461466.1888 mE, 3732859.0079999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 25
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4941** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 12:11:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461468.35690000001 mE, 3732865.287 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 8"@6', 9"@6' Height (feet): 15
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4942** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 12:17:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461468.34940000001 mE, 3732863.4389999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 18" Height (feet): 30
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Moderate	None	None
Cavity	None	Moderate	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4943** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 12:28:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461471.57669999998 mE, 3732859.73 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 4 dbH (inches): 7"@8', 10"@8', 7"@8', 7"@8' Height (feet): 25
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	Moderate	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	Moderate	Low	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4944** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 12:34:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 461466.6556 mE, 3732864.554 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 10" Height (feet): 20
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	Moderate	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4945** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 2:11:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462070.47259999998 mE, 3732549.6529999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 27"@3', 7"@3' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Severe	Moderate	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Severe	Severe	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4946** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 2:42:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462100.08870000002 mE, 3732542.514 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 28" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Low	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4947** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 2:57:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462127.07659999997 mE, 3732534.46 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 19" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4948** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 3:08:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462186.67210000003 mE, 3732515.0060000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 20" Height (feet): 25
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	Low	None	None
Cavity	None	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4949** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 3:16:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462404.47850000003 mE, 3732526.0899999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 19" Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	Low	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	Low	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4950** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 4:25:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462612.92660000001 mE, 3732523.8620000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 20" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4951** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 4:36:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462711.86070000002 mE, 3732475.2450000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 22" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4952** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 4:43:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462860.68770000001 mE, 3732352.517 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 27" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	Severe	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4953** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/11/2011 4:48:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462908.42869999999 mE, 3732320.7319999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 43" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	Moderate	None
Included Bark	None	None	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	Moderate	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4954** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 9:19:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462908.52840000001 mE, 3732346.4180000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 41" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☒ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	Moderate	None
Included Bark	None	None	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4955** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 9:26:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462935.65029999998 mE, 3732333.1000000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 29" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **4956** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 9:55:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462950.17099999997 mE, 3732334.892 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 12"@3', 10"@3', 14"@3' Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Fence

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4957** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 9:35:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462934.61499999999 mE, 3732304.7379999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 43" Height (feet): 55
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☒ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☒ yes ☐ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Moderate	Moderate	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4958** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 9:43:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462963.90360000002 mE, 3732292.4279999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 22" @3', 13"@3' Height (feet): 45
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4959** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 10:09:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462972.27250000002 mE, 3732319.6340000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 14"@2', 18"@2' Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Fence

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Severe	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4960** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 10:23:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462983.40749999997 mE, 3732305.1039999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 37" Height (feet): 55
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	Moderate	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	Moderate	None
Cankers/galls/burls	None	None	None	Low

OAK FIELD EVALUATION

Tree Number: **4961** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 10:31:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462993.7929 mE, 3732275.6809999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 40"@5', 7"@5' Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☒ yes ☐ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Moderate	Moderate	None	None
Decay	Low	Low	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4962** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 10:40:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462990.99790000002 mE, 3732271.6269999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☐ normal ☒ small
Annual Shoot Growth: ☐ excellent ☐ average ☒ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4963** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 10:47:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463006.73379999999 mE, 3732268.2390000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 30" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	Low	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4964** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 11:40:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 462999.76020000002 mE, 3732267.4649999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 12
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Low	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4965** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 11:50:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463015.43099999998 mE, 3732281.3259999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 34" Height (feet): 50
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Low	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	Moderate	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4966** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 12:06:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463004.23019999999 mE, 3732265.6209999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 12" Height (feet): 20
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Low	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4967** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 12:24:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463008.26429999998 mE, 3732264.7220000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 7"@1', 7"@1', 7"@1' Height (feet): 12
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 25 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	Severe	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	Low	Low	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4968** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 12:30:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463009.66029999999 mE, 3732266.3799999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 3 dbH (inches): 11"@5', 7"@5', 16"@5' Height (feet): 20
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	Low	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4969** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 12:34:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463005.9497 mE, 3732265.1009999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 6" Height (feet): 12
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4970** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 12:38:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463016.13439999998 mE, 3732263.5830000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 20
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☒ yes ☐ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	Low	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4971** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 12:42:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463015.05499999999 mE, 3732263.9569999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 6" Height (feet): 10
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Moderate	None	None	None
Bow, Sweep	Low	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4972** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 1:17:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463013.3161 mE, 3732278.003 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 12" Height (feet): 20
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 20 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4973** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 2:03:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463022.19170000002 mE, 3732272.7990000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 20"@3', 23"@3' Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	Severe	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4974** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 2:14:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463023.60479999997 mE, 3732267.8640000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 6"@1', 7"@1' Height (feet): 10
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☐ normal ☒ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 25 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	Severe	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	Moderate	Low	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4975** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 2:25:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463022.05040000001 mE, 3732260.682 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 15" Height (feet): 25
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Moderate	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4976** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 2:34:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463025.86969999998 mE, 3732259.8369999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 6" Height (feet): 15
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☐ average ☒ poor
Vigor Class: ☐ excellent ☐ average ☐ fair ☒ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4977** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 2:53:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463024.15740000003 mE, 3732262.074 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 20
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Moderate	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4978** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 3:06:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463028.06359999999 mE, 3732255.227 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 10
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Severe	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4979** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/14/2011 2:59:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463032.21950000001 mE, 3732267.676 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 12" Height (feet): 30
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☒ yes ☐ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Severe	None
Bow, Sweep	None	None	Severe	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4981** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 11:33:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463033.72240000003 mE, 3732260.0040000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 16" Height (feet): 40
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4982** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 11:40:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463025.84940000001 mE, 3732260.4040000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 9" Height (feet): 30
Form: ☐ generally symmetric ☐ minor asymmetry ☒ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☐ intermediate ☒ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☒ yes ☐ no
Leaf Size: ☐ normal ☒ small
Annual Shoot Growth: ☐ excellent ☐ average ☒ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4983** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 11:53:00 AM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463035.29190000001 mE, 3732256.1529999999 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 9"@2', 10"@2' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Severe	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4984**
Site/Address: Temescal Canyon Road
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other:
NAD83 UTM Coordinates: 463035.11560000002 mE, 3732260.923 mN

Inspector: Thomas Juhasz
Date: 11/21/2011 11:58:00 AM
Impact: Encroachment

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 8" Height (feet): 20
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4985** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:06:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463055.64079999999 mE, 3732258.2560000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 36" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	Moderate	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4986** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:15:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463042.00140000001 mE, 3732284.7340000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 36" Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☒ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4987** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:19:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463051.59519999998 mE, 3732290.6120000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 15" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	Moderate	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4989** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:30:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463068.35950000002 mE, 3732273.1749999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 21"@3', 6"@3' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4990** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:33:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463070.22940000001 mE, 3732277.6030000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 6" Height (feet): 10
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Moderate	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4991** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:37:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463069.61109999998 mE, 3732277.4210000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 5" Height (feet): 10
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☐ average ☒ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 15 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	Moderate	Moderate	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4992** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:45:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463086.58130000002 mE, 3732279.3470000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 12" Height (feet): 20
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Severe	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4993** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 12:52:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463103.9584 mE, 3732269.0350000001 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 13" Height (feet): 20
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☒ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	Moderate	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	Low	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Low	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4994** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 1:35:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463132.65010000003 mE, 3732264.6749999998 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 29" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☒ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Moderate	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4995** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 1:43:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463140.761 mE, 3732255.679 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 7" Height (feet): 15
Form: ☐ generally symmetric ☒ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☐ dominant ☐ co-dominant ☒ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 10 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4996** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 1:58:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463302.1249 mE, 3732177.7140000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 1 dbH (inches): 24" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☒ topped ☐ crown raised ☐ pollarded ☒ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☐ excellent ☐ average ☒ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☐ excellent ☒ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☒ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: Utility line

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	Severe	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	Moderate	Moderate	None	None
Decay	Moderate	Moderate	None	None
Cavity	Low	Low	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	Moderate	Moderate	None	None
Deadwood Stubs	Moderate	Moderate	Moderate	Moderate
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4997** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/21/2011 1:15:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 463380.69949999999 mE, 3732049.034 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 20"@18", 20"@18" Height (feet): 40
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Severe	Severe	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4998** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 3:43:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460148.28399999999 mE, 3733702.1490000002 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 19"@3', 26"@3' Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☒ moderate ☐ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Low	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Low	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **4999** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 3:10:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 458437.0209 mE, 3734433.406 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 4 dbH (inches): 30"@2', 12"@2', 30"@2', 25"@2' Height (feet): 50
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☒ flush cuts ☐ cabled/braced ☐ none
Special Value: ☒ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☒ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **5000** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 3:29:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460016.8627 mE, 3733783.855 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 6 dbH (inches): 9"@2', 6"@2', 10"@2', 10@5", 9"@5", 4"@5" Height (feet): 15
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☒ young ☐ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	Moderate	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	Moderate	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	None
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **5001** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 3:48:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460192.61349999998 mE, 3733663.077 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 2 dbH (inches): 11"@4', 18"@4' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☐ semi-mature ☒ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☐ yes ☒ no
Leaf Size: ☒ normal ☐ small
Annual Shoot Growth: ☒ excellent ☐ average ☐ poor
Woundwood Development: ☒ excellent ☐ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☒ other: None

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 5 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	None	Low
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	None

OAK FIELD EVALUATION

Tree Number: **5002** Inspector: Thomas Juhasz
Site/Address: Temescal Canyon Road Date: 11/29/2011 3:55:00 PM
Site Ownership: ☒ public ☐ private ☐ unknown ☐ other: Impact: Encroachment
NAD83 UTM Coordinates: 460241.19870000001 mE, 3733622.577 mN

Tree Characteristics
Species: ☒ *Quercus agrifolia* ☐ *Quercus engelmannii* ☐ *Quercus beberidifolia* ☐ Other:
Number of Trunks: 4 dbH (inches): 11"@3', 10"@4', 12"@4', 8"@4' Height (feet): 30
Form: ☒ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed
Crown Class: ☒ dominant ☐ co-dominant ☐ intermediate ☐ suppressed
Age Class: ☐ young ☒ semi-mature ☐ mature ☐ overmature/senescent
Pruning History: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☒ none
Special Value: ☐ specimen ☐ heritage/historic ☒ wildlife ☐ unusual ☐ street tree ☐ screen ☒ shade ☒ indigenous ☒ protected by government agency

Tree Health
Foliage Color: ☒ normal ☐ chloritic ☐ necrotic
Epicormics: ☒ yes ☐ no
Leaf Size: ☐ normal ☒ small
Annual Shoot Growth: ☐ excellent ☐ average ☒ poor
Woundwood Development: ☐ excellent ☒ average ☐ poor
Vigor Class: ☒ excellent ☐ average ☐ fair ☐ poor
Growth Obstructions: ☐ stakes ☐ wires/ties ☐ signs ☐ cables ☐ curb/pavement ☐ guards ☐ other:

Defects:
Root Rot Suspected: ☐ yes ☒ no
Exposed Roots: ☐ severe ☐ moderate ☒ low ☐ none
Buttress Wounded: ☐ yes ☒ no
Restricted Root Area: ☐ severe ☐ moderate ☒ low ☐ none
Potential for Root Failure: ☐ severe ☐ moderate ☒ low ☐ none
Lean Degrees from Vertical: 0 Type: ☒ natural ☐ unnatural ☐ self-corrected
Decay in Lean of Plane: ☐ yes ☒ no
Soil Cracking: ☐ yes ☒ no

Defect	Root Crown	Trunk	Scaffolds	Branches
Poor Taper	None	None	None	None
Bow, Sweep	None	None	None	None
Codominants, Forks	None	None	None	None
Multiple Attachments	None	None	None	None
Included Bark	None	None	None	None
Excessive End Weight	None	None	None	None
Cracks/Splits	None	None	None	None
Hangers	None	None	None	None
Girdling	None	None	None	None
Wounds/Seam	None	None	None	None
Decay	None	None	None	None
Cavity	None	None	None	None
Conks/Mushrooms	None	None	None	None
Bleeding/Sap Flow	None	None	None	None
Loose/Cracked Bark	None	None	None	None
Deadwood Stubs	None	None	Moderate	Severe
Borers/termites	None	None	None	None
Cankers/galls/burls	None	None	None	Low

Appendix D

Tree Photographs



No 1-16. *Quercus agrifolia.*



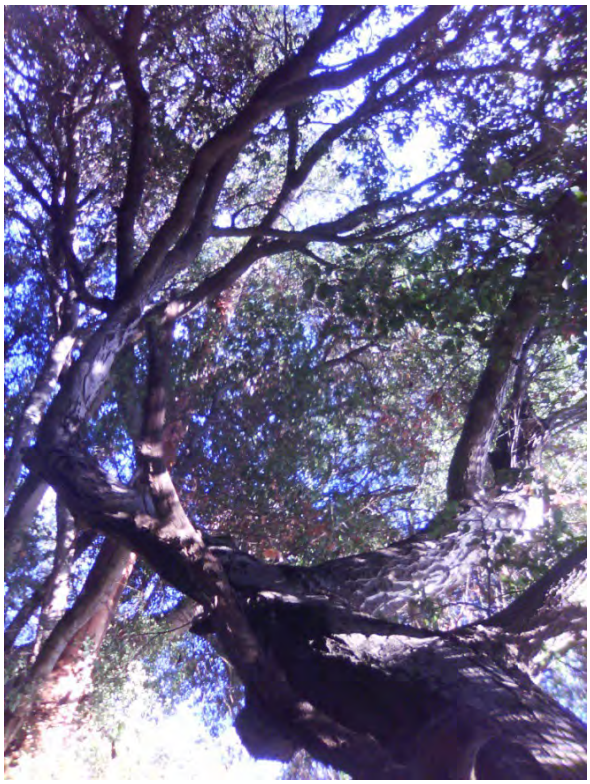
No 17. Quercus *agrifolia.* DBH 25”



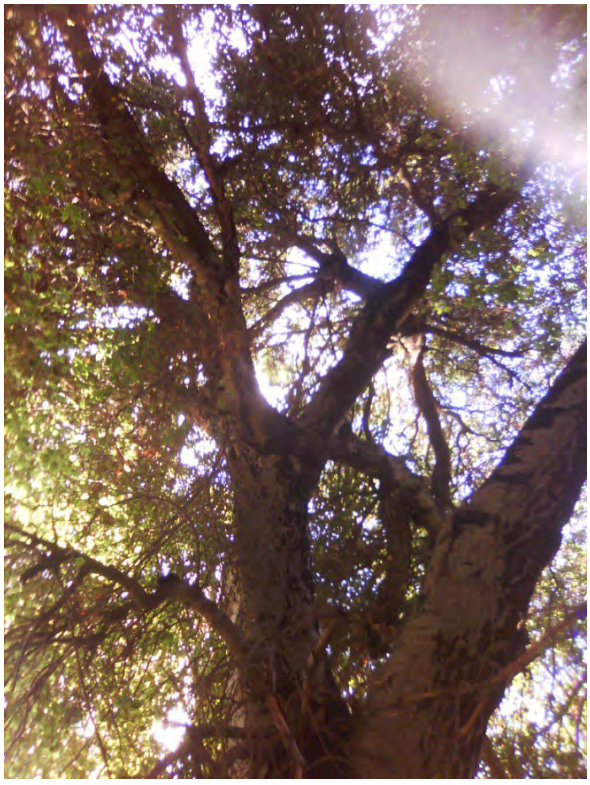
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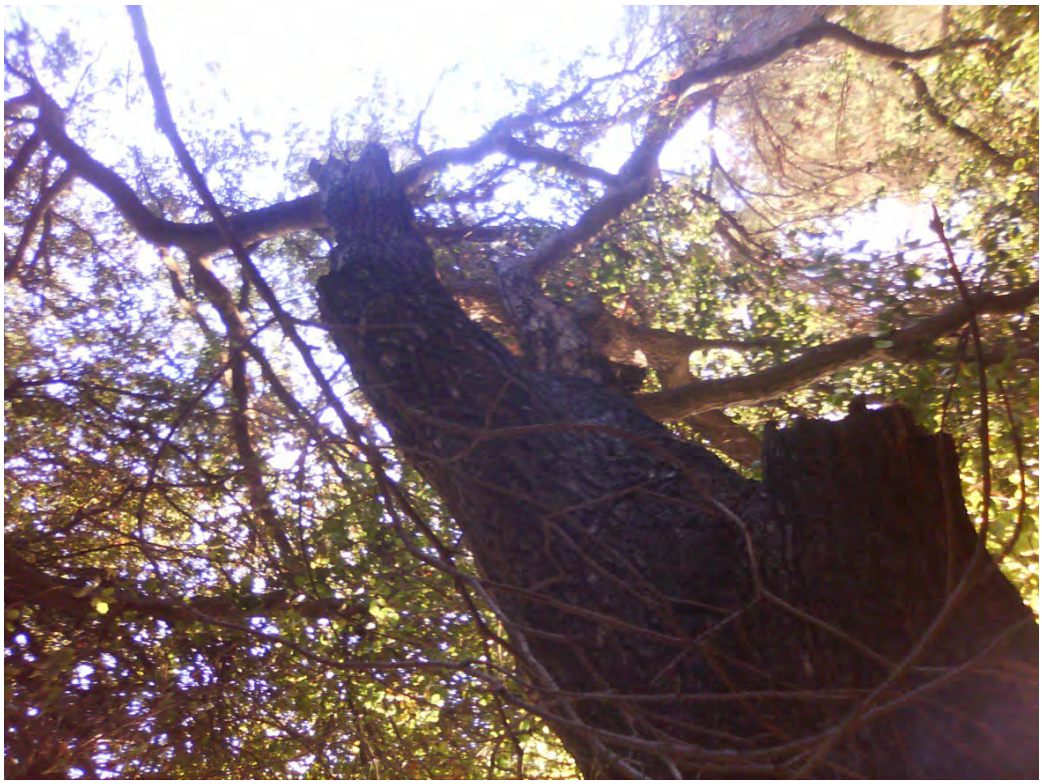
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No 21. *Quercus agrifolia.* DBH 24”



No 22. *Quercus agrifolia.* DBH 21”



No. 23 – 55. *Quercus agrifolia*.



No 56. *Quercus agrifolia.* DBH 5”2’, 4”@2’



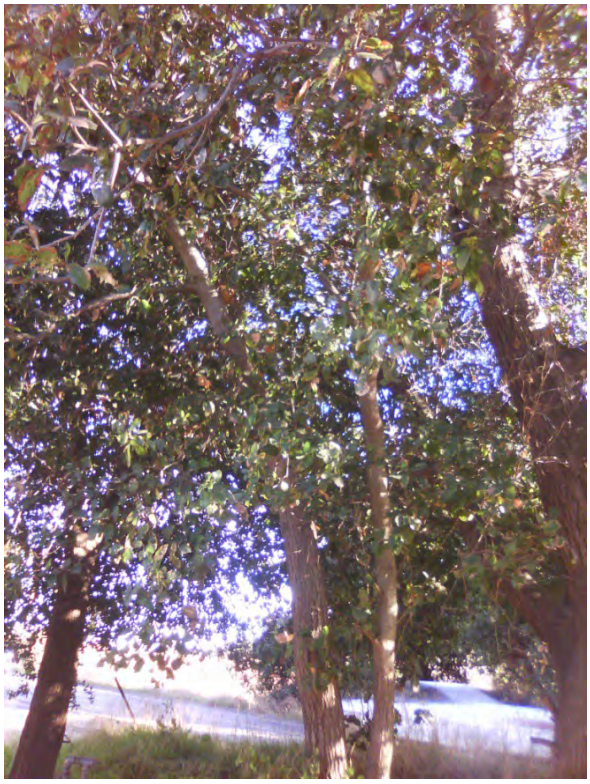
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No 59. *Quercus agrifolia.* DBH 13”@2’, 7”@2’



No 60. *Quercus agrifolia.* DBH 6”@2’, 4”@2’



No 61. *Quercus agrifolia.* DBH 10”@8’, 5”@8’, 4”@8’



No 62. *Quercus agrifolia.* DBH 22”



No 63. *Quercus agrifolia.* DBH 32”



No 64. *Quercus agrifolia.* DBH 36”



No 65. *Quercus agrifolia.* DBH 15”@3”, 12”@3”



No 66. *Quercus agrifolia.* DBH 23”



No 67. *Quercus agrifolia.* DBH 32”



No 68. *Quercus agrifolia.* DBH 2”@8”, 5”@8”



No 69. *Quercus agrifolia.* DBH 25”@3’, 18”@3’



No 70. *Quercus agrifolia.* DBH 62”



No 71. *Quercus agrifolia.* DBH 27”



No 72. *Quercus agrifolia.* DBH 12”@4’, 8”@4’, 10”@4’



No 73. *Quercus agrifolia.* DBH 42”



No 74. *Quercus agrifolia.* DBH 9”@2’, 12”@’2’



No 75. *Quercus agrifolia.* DBH 23”



No 76. *Quercus agrifolia.* DBH 32”



No 77. *Quercus agrifolia.* DBH 5”@2’, 6@2’, 5”@2, 5”@2, 5”@2’, 5”@2’, 5”@2’, 5”@2’, 5”@2’



No 78. *Quercus agrifolia.* DBH 22”



No 79. *Quercus agrifolia.* DBH 21”



No 80. *Quercus agrifolia.* DBH 29”



No 81. *Quercus agrifolia.* DBH 22”



No 82. *Quercus agrifolia.* DBH 26”



No 83. *Quercus agrifolia.* DBH 26”



No 84. *Quercus agrifolia.* DBH 25”@5’, 12”@5’



No 85. *Quercus agrifolia.* DBH 32”@2’, 18”@2’



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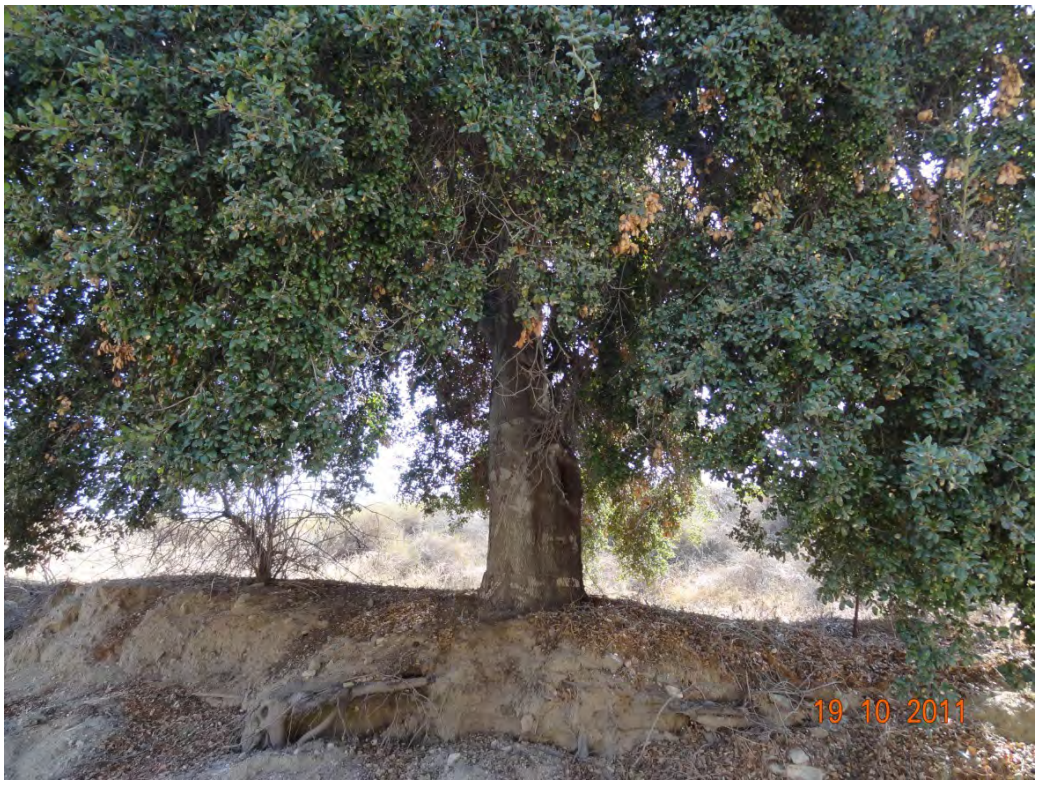
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No 89. *Quercus agrifolia.* DBH 18”@3’, 16”@3’.



No 90 – 94. *Quercus agrifolia.*



No 95. *Quercus agrifolia.* DBH 38”



No 96. *Quercus agrifolia.* DBH 29".



No 97. *Quercus agrifolia.* DBH 28".



No 98. *Quercus agrifolia.* DBH 32".



No 99. *Quercus agrifolia.* DBH 28"



No 104. *Quercus agrifolia.* DBH 13”@1’, 14”@1’



No. 105-106. *Quercus agrifolia*. DBH 22” and 34”



No. 107. *Quercus agrifolia.* DBH 22”



No. 108. *Quercus agrifolia.* DBH 22”



No. 109. *Quercus agrifolia.* DBH 22”



No. 110. *Quercus agrifolia.* DBH 22”



111-123. *Quercus agrifolia.* DBH not available



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No 125. *Quercus agrifolia*. DBH 20"@13' and 19"@13'



No 126 and 127. *Quercus agrifolia.* DBH 18" and 54"



No 128. *Quercus agrifolia.* DBH 40”



No 129. *Quercus agrifolia.* DBH 20”



No 130. *Quercus agrifolia.* DBH 10”



No 131. *Quercus agrifolia.* DBH 40”



No 132. *Quercus agrifolia.* DBH 22”



No 133. *Quercus agrifolia.* DBH 15”



No 134. *Quercus agrifolia.* DBH 22”@1’, 19”@1’



No 135. *Quercus agrifolia.* DBH 22”@2’, 18”@2’



No 136 - 138. *Quercus agrifolia.* DBH 23”@1’, 24”@1’. 29”@1’. 30”.



No 139. *Quercus agrifolia.* DBH 9”



No 140 and 141. *Quercus agrifolia.* DBH 11" and 14"



No 142 and 143. *Quercus agrifolia.* DBH 6" and 5"



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No 145 - 148. *Quercus agrifolia.* DBH 33”. 6”. 5”. 5”@1, 2”@1.



No 149 - 155. *Quercus agrifolia.* DBH 5”@3, 3”@3’. 8”. 11”. 6”@6’, 7”@6’. 7”. 3”. 7”.



No. 156 - 160. *Quercus agrifolia*.



No 161. *Quercus agrifolia.* DBH 5”



No 162. *Quercus agrifolia.* DBH 32”



No 163. *Quercus agrifolia.* DBH 36”



No 164. *Quercus agrifolia.* DBH 27”



No 165. *Quercus agrifolia.* DBH 27”



No 166. *Quercus agrifolia.* DBH 24”



No 167. *Quercus agrifolia.* DBH 13”@3’, 9”@3’



No 168. *Quercus agrifolia.* DBH 27”@3’, 14”@3’



No 169. *Quercus agrifolia.* DBH 11”@3’, 10”@3’



No 170. *Quercus agrifolia.* DBH 30”



No 171. *Quercus agrifolia.* DBH 8”@2’, 7”@2’



No 172. *Quercus agrifolia.* DBH 12”



No 173. *Quercus agrifolia.* DBH 21”



No 174. *Quercus agrifolia.* DBH 18”



No 175. *Quercus agrifolia.* DBH 14”@4’, 10”@4’, 10”@4’



No 176. *Quercus agrifolia.* DBH 14”



No 177. *Quercus agrifolia.* DBH 14”@3’, 9”@3’



No 178. *Quercus agrifolia.* DBH 19”



No 179. *Quercus agrifolia.* DBH 12”



No 180. *Quercus agrifolia.* DBH 25”



No 181. *Quercus agrifolia.* DBH 45”



No 182. *Quercus agrifolia.* DBH 19”



No 183. *Quercus agrifolia.* DBH 12”



No 184. *Quercus agrifolia.* DBH 28”



No 185. *Quercus agrifolia.*



No 186. *Quercus agrifolia.* DBH 14”



No 187. *Quercus agrifolia.* DBH 14”@2’, 12”@2’



No 188. *Quercus agrifolia.* DBH 6”@2’, 5”@2’, 4”@2’



No 189. *Quercus agrifolia.* DBH 7”



No 190. *Quercus agrifolia.* DBH 17”@1’, 15”@1’



No 191. *Quercus agrifolia.* DBH 49”



No 192. *Quercus agrifolia.* DBH 28”



No 193. *Quercus agrifolia.* DBH 28”



No 194. *Quercus agrifolia.* DBH 21”



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No 197. *Quercus agrifolia.* DBH 25”



No 198. *Quercus agrifolia.* DBH 22”



No 199. *Quercus agrifolia.* DBH 14”@3’, 17”@3’, 20”@3’



No 200. *Quercus agrifolia.* DBH 29”



No 4925. *Quercus agrifolia.* DBH 44”



No 4926. *Quercus agrifolia.* DBH 6”@2’, 8”@2’, 10”@2’, 5”@1’



No 4927. *Quercus agrifolia.* DBH 13”@2’, 9”@2’



No 4928. *Quercus agrifolia.* DBH 8”



No 4929. *Quercus agrifolia.* DBH 9”



No 4930. *Quercus agrifolia.* DBH 13”



No 4931. *Quercus agrifolia.* DBH 41”



No 4932. *Quercus agrifolia.* DBH 41”



No 4933. *Quercus agrifolia.* DBH 18'@3", 4"@3', 10"@3', 7"@3', 12"@3'



No 4934. *Quercus agrifolia.* DBH 31"



No 4935. *Quercus agrifolia.* DBH 19”@2’, 15”@2’



No 4936. *Quercus agrifolia.* DBH 6”



No 4937. *Quercus agrifolia.* DBH 13”@3’, 15”@3’



No 4938. *Quercus agrifolia.* DBH 18”



No 4939. *Quercus agrifolia.* DBH 10”



No 4940. *Quercus agrifolia.* DBH 8”



No 4941. *Quercus agrifolia.* DBH 8”@6’, 9”@6’



No 4942. *Quercus agrifolia.* DBH 18”



No 4943. *Quercus agrifolia.* DBH 7”@8’, 10”@8’, 7”@8’, 7”@8’



No 4944. *Quercus agrifolia.* DBH 10”



No 4945. *Quercus agrifolia.* DBH 27”@3’, 7”@3’



No 4946. *Quercus agrifolia.* DBH 28”



No 4947. *Quercus agrifolia.* DBH 19”



No 4948. *Quercus agrifolia.* DBH 20”



No 4949. *Quercus agrifolia.* DBH 19”



No 4950. *Quercus agrifolia.* DBH 20”



No 4951. *Quercus agrifolia.* DBH 22”



No 4952. *Quercus agrifolia.* DBH 27”



No 4953. *Quercus agrifolia.* DBH 43”



No 4954. *Quercus agrifolia.* DBH 41”



No 4955. *Quercus agrifolia.* DBH 29”



No 4956. *Quercus agrifolia.* DBH 12"@3', 10"@3', 14"@3'



No 4957. *Quercus agrifolia.* DBH 43”



No. 4958. *Quercus agrifolia*. DBH 43”.



No 4959. *Quercus agrifolia.* DBH 14”@2’, 18”@2’



No 4960. *Quercus agrifolia.* DBH 37”



No 4961. *Quercus agrifolia.* DBH 40”@5’, 7”@5’



No 4962. *Quercus agrifolia.* DBH 9”



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No 4964. *Quercus agrifolia.* DBH 8”



No 4965. *Quercus agrifolia.* DBH 34”



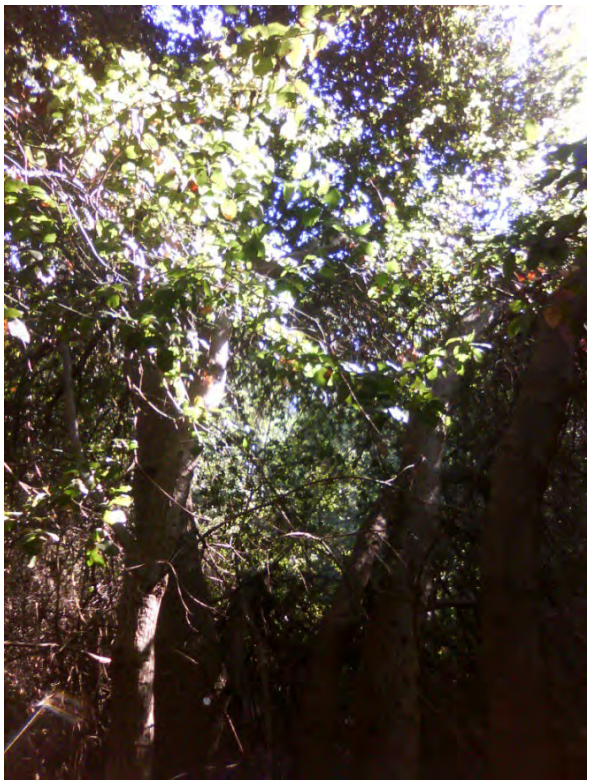
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No 4969. *Quercus agrifolia.* DBH 6”



No 4970. *Quercus agrifolia.* DBH 9”



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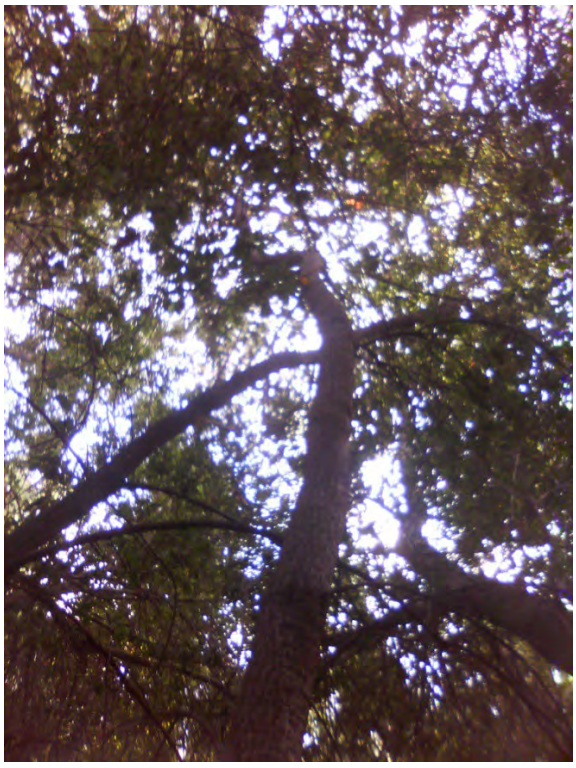
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No 4976. *Quercus agrifolia.* DBH 6”



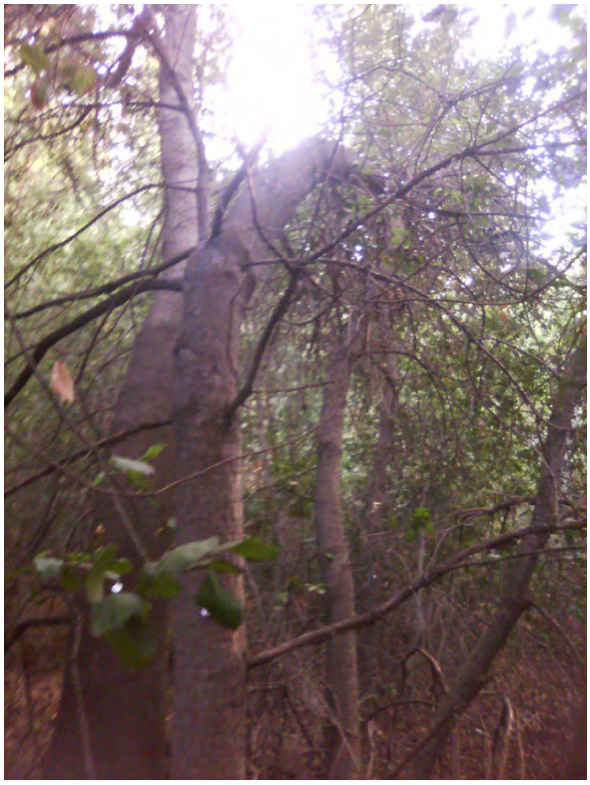
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No 4979. *Quercus agrifolia.* DBH 12”



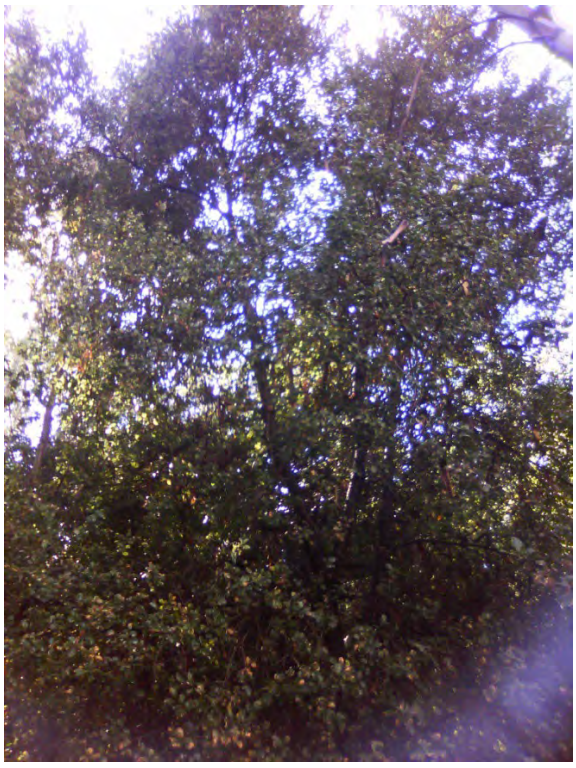
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No 4981. *Quercus agrifolia.* DBH 16”



No 4982. *Quercus agrifolia.* DBH 9”



No 4983. *Quercus agrifolia.* DBH 9”@2’, 10”@2’



No 4984. *Quercus agrifolia.* DBH 8”



No 4985. *Quercus agrifolia.* DBH 36”



No 4986. *Quercus agrifolia.* DBH 36”



No 4987. *Quercus agrifolia.* DBH 15”



No 4989. *Quercus agrifolia.* D BH 21”@3’, 6”@3’



No 4990. *Quercus agrifolia.* DBH 6”



No 4991. *Quercus agrifolia.* DBH 5”



No 4992. *Quercus agrifolia.* DBH 12”



No 4993. *Quercus agrifolia.* DBH 13”



No 4994. *Quercus agrifolia.* DBH 29”



No 4995. *Quercus agrifolia.* DBH 7”



No 4996. *Quercus agrifolia.* DBH 24”



No 4997. *Quercus agrifolia.* DBH 20”@18’, 20”@18’



No 4998. *Quercus agrifolia.* DBH 19”@3’, 26’@3’



No 4999. *Quercus agrifolia.* DBH 30”@2’, 12”@2’, 30”@2’, 25”@2’



No 5000. *Quercus agrifolia.* DBH 9”@2’, 6”@2’, 10”@2’, 10”, @5’, 9”@5’, 4”@5’



No 5001. *Quercus agrifolia.* DBH 11”@4’, 18”@4’



No 5002. *Quercus agrifolia.* DBH 11"@3', 10"@4', 12"@4', 8"@4"

F5
2013 Focused Species Survey Reports

2013 Least Bell's Vireo & Southwestern Willow Flycatcher Survey Results for the Alberhill System Project

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I. INTRODUCTION

Kidd Biological, Inc (KBI) was contracted by AECOM to conduct protocol breeding season surveys for the least Bell's vireo (*Vireo bellii pusillus*), (LBVI), and southwestern willow flycatcher (*Empidonax traillii extimus*), (SWWF). The surveys were performed to satisfy requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), under which LBVI and SWWF are considered covered species, however under 6.1.2 of the MSHCP, surveys for these species must be conducted when impacts to riparian habitats are expected. The surveys followed protocol established for these species by the U.S. Fish and Wildlife Service (USFWS). KBI employee Mr. Jason Berkley (TE 009015-3), conducted all protocol southwestern willow flycatcher surveys and 3 of the 6 least Bell's vireo surveys. Biologist Nina Kidd conducted the other 3 vireo surveys.

II. PROJECT OBJECTIVES

SCE proposes to construct the Project to serve current and projected demand for electricity and maintain electric system reliability in southwestern Riverside County (County), including the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar as well as the surrounding unincorporated areas.

The Project includes the following Project components: the proposed Alberhill Substation, the proposed 500kV Transmission Lines (T/Ls), the proposed 115kV sub T/L, the alternative 115kV sub T/L, and proposed and alternative Bulk Power and Sub-transmission laydown yards.

III. SURVEY LOCATIONS

Generally the proposed project is located within Western Riverside County in Southern California, between Corona and Murrieta (Appendix A, Figure 1). The surveys for the LBVI and SWWF were divided into 5 distinct survey areas. These are described in more specific detail below:

Alberhill Substation

This site is located north of Interstate 15 and Temescal Canyon Road, approximately 1.5 miles southeast of Lee Lake. It is located in Section 16 of Township 5 south, Range West of the Alberhill, CA 7.5 minute USGS Topographic Quadrangle (Appendix A, Figures 2, 3 & 4).

Seep (500 kV Area)

This survey area is just east of the Alberhill substation survey area and is within the same Section of the Alberhill Quadrangle. It is approximately ½ mile up an unnamed canyon, beyond the end of Black Powder Road (Appendix A, Figures 2, 3 & 5).

San Jacinto River East (115 kV Area)

This survey area is located just west of where Interstate 15 crosses over the San Jacinto River and extends to the Auto Center Drive bridge to the west. It is south of Highway 74 and approximately 1.5 miles east of Lake Elsinore. It can also be described as occurring within Section 9 of Township 6 South, Range 4 West of the Lake Elsinore, CA USGS topographic quadrangle (Appendix A, Figures 2, 6 & 7).

San Jacinto River West (115 kV Area)

This survey area is located just south of SJR East Survey Area were the San Jacinto River extends southwest past the Auto Center Drive bridge to the Lakeshore Drive bridge. It is south of Highway 74 and is also approximately 1.5 miles east of Lake Elsinore. It can also be described as occurring within Section 9 of Township 6 South, Range 4 West of the Lake Elsinore, CA USGS topographic quadrangle (Appendix A, Figures 2, 6 & 7).

Vine Street (115 kV Area)

The Vine Street survey area is the furthest south of the 5 survey areas and is located west of Interstate 15 and Mission Trail Road, approximately 1.5 miles south of Diamond Drive/Railroad Canyon and 0.5 miles north of Corydon Street, near the south end of Lake Elsinore. It can also be described as occurring within Section 22 of Township 6 South, Range 4 West of the Lake Elsinore, CA USGS topographic quadrangle (Appendix A, Figures 2, 6 & 8).

IV. HABITAT DESCRIPTIONS

Habitat descriptions were taken from previously prepared reports (AECOM 2012, MSHCP 2003) and from Holland (1986).

Alberhill Substation supports a small patch of riparian habitat associated with a pond inside a horse track of an abandoned horse ranch/training facility. This pond was likely artificially irrigated with well or municipal water and likely holds water after large rain events and in years of high rainfall. During the surveys the area held little to no water. The vegetation is comprised mostly of ornamentals such as Mexican fan palms (*Washingtonia robusta*), coral trees (*Erythrina* sp.) and tree of heaven (*Ailanthus* sp.) however there are also areas of willows (*Salix* sp.) and mulefat (*Baccharis salicifolia*) as well as some wetland vegetation such as bulrush (*Scirpus* sp.) and cattails (*Typha* sp.). Although the habitat here is generally marginal, the proximity to Temescal Creek makes the possibility of riparian bird species to use this area likely during years of high nesting production.

Seep (500kV Area) This small patch of habitat is to the east of the substation, up a long canyon. The lower reaches of this canyon where the project area is located almost completley lacks riparian vegetation other than this ponded area which may be fed by a seep. This area is quite small and measures approximatley 150' x 250' which contains dense riparian vegetaion comprised of arrowweed (*Pluchea sericea*) and mulefat scrub, mature willow and elderberry (*Sambucus mexicana*) trees and a dense understory of mugwort (*Artemesia douglasiana*) and other annuals. The substrate within this vegetated area is rocky and in some areas the main channel was comprised of granite.

San Jacinto River East (115 kV) This survey area contains relatively mature willow and cottonwood riparian woodland which occurs in somewhat narrow stands bordering the San Jacinto River, immediatley upstream of Auto Center Drive. The San Jacinto River, along this stretch carried running and ponded water throughout most of the survey period (April-June). The ponded area contained surface water until the 6th survey (June 24). Of all the survey areas, this one is possibly the highest quality for both vireo and flycatcher due to the density of the vegetation and flowing water. It also contains a well-developed structure with a dense understory and minimal non-native vegetation. It is limited though in its quality by the proximity to Interstate 15 and other development as well as just the relatively small area of good habitat.

San Jacinto River West (115 kV) The San Jacinto River West survey area is immediately downstream of San Jacinto River east, separated only by the Auto center Drive bridge (Appendix A, Figure7). The vegetation within this section, which lines a broader and more open section of the San Jacinto River, appears as a significantly more disturbed riparian community. Although it still supports a few mature willow trees, it is dominated by nonnative vegetation, including salt cedar (*Tamarix ramosissima*) and giant reed (*Arundo donax*). The upper banks of this survey area were also dominated by ruderal vegetation (e.g., mustard [*Brassica* sp.], tocalote [*Centaurea melitensis*], and castor bean [*Ricinus communis*]). This site was considered marginal for LBV, and unsuitable for SWWF. This area also had a significant patch of arrowweed on the upper banks. For most of the surveys this area either had flowing water or the sandy wash was wet. By June 24th (Survey # 6), the water was no longer flowing.

Vine Street (115 kV) The impact area for this survey area is a very small, consisting primarily of a few young willow trees growing in an otherwise open field. However, approximately 150 feet west of the impact area, there is fairly extensive riparian scrub habitat. This habitat is characterized by a mix of young to moderate aged willows and large stands of salt cedar. Eucalyptus woodlands occur to the north of the riparian area and to the west is a large Off Highway Vehicle park. The habitat quality of this survey area was considered moderate to poor, due to the limited amount of native riparian vegetation, the relatively dry nature of the area, and the disturbance associated with homeless encampments and illegal dumping.

v. LEAST BELL'S VIREO

SPECIES DESCRIPTION, DISTRIBUTION, AND STATUS

The vireo is a small greenish-gray songbird with a white underbelly, two white wingbars, and white spectacles across the lores. The vireo was once widespread throughout the Central Valley and other low elevation river valleys of California. Historically, the vireo's breeding range extended from the interior of northern California to northwestern Baja California. The vireo typically prefers riparian areas dominated by willows of mixed age composition. These areas frequently include other trees such as western cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*), with a dense understory of young willows, mule-fat, California wild rose (*Rosa californica*), and a variety of other shrubby species. Within western Riverside County the core populations are primarily Prado Basin and the Santa Ana River, with other smaller populations in Temescal Wash (including Alberhill Creek), Mockingbird Canyon, Murrieta Creek, Temecula Creek, Lake Skinner (including Rawson Canyon), Vail Lake, Wilson Creek, and San Timoteo Canyon. According to the MSHCP "other geographic locations that are recorded within the U.C. Riverside database and by the USFWS include: Lake Elsinore, March ARB, Meadowbrook, Canyon Lake, De Luz Creek, Potrero Creek, Bautista Creek, and Reche Canyon (USFWS 1998)"

Loss and degradation of breeding habitat has been the greatest contributor to the decline of the vireo and flycatcher. Habitat conversion for agricultural purposes has removed much of the original riparian woodland, and flood control measures and channelization have further depleted the riparian habitats used by the vireo and flycatcher as well as other riparian birds. The significant reduction in the population size and range of the vireo resulted in it being listed as a state endangered species in June 1980, and

federally listed as endangered in May 1986. Critical Habitat for this species was designated in 1994, however, no critical habitat occurs within the survey areas.

LBVI Survey Methods

Presence/absence surveys were conducted according to the 19 January 2001 USFWS Least Bell's Vireo Survey Guidelines. All potential vireo habitat and riparian areas within the study sites were surveyed eight times during the breeding season with at least 10 days between survey visits for each site. The surveys were conducted during the morning hours (prior to 11:00 a.m., however on the first survey, the survey lasted until noon due to some access issues) and when the temperature exceeded 13 degrees Celsius (° C) or 55 degrees Fahrenheit (° F). Less than 3 linear kilometers (km) of habitat were surveyed per day. Biologists listened for vireo songs, calls, whisper songs, scolds and looked for adults and juveniles. Any nesting behavior was also noted.

Vireo observations were recorded in a field notebook, and GPS readings of the locations were taken during the surveys. Numbers and locations of paired or unpaired territorial males, and the ages and sexes of encountered vireos (when discernible) were noted. The biologist also checked for colored leg bands when vireos were found.

VI. SOUTHWESTERN WILLOW FLYCATCHER

Species Description, Distribution, and Status

The southwestern willow flycatcher is a small, insectivorous passerine that migrates north in the spring from South America, Mexico, and Central America, to breed in the southwestern desert riparian habitats of California, Arizona, New Mexico, and Texas. Within western Riverside County it has been recorded as a single location or very few locations currently or historically within Temescal Wash/Alberhill Creek, Canyon Lake, Temecula Creek, Box Springs Mountains, Bautista Creek, Vail Lake, Hemet Lake (old record), Santa Rosa Plateau Nature Reserve, Lake Mathews, Lake Skinner, Lake Perris, and Potrero Creek (Riverside County 2003).

The willow flycatcher has a grayish-green back, whitish throat, pale yellowish belly, and two white wingbars. Like the vireo, the flycatcher occurs in riparian woodland habitat that is characterized by a dense growth of willows, mulefat, arrowweed), buttonbush (*Cephalanthus* sp.) cottonwood, sycamore, and tamarisk (*Tamarix* sp.). In addition to willow riparian woodland, the flycatcher also nests in coast live oak woodland (*Quercus agrifolia*) on the upper San Luis Rey River, San Diego County, California; in dense stands of tamarisk on the lower Colorado River, Imperial and Riverside Counties, California; and in stands of mixed willow and white alder (*Alnus rhombifolia*) on Mill Creek in San Bernardino County, California. Surface water or saturated soils are usually present in or adjacent to nesting thickets. The southwestern subspecies of willow flycatcher was federally listed as endangered in March 1986 (USFWS 1995). Critical habitat was established in 2005, and then revised in 2013.

SWWF Survey Methods

Presence/absence surveys were conducted according to the 11 July 2000 revised protocol for project-

related surveys and the general guidelines described by Sogge et al. (2010). All potential flycatcher habitat and riparian areas within the survey area were surveyed five times: one visit during Period 1 (May 15 to May 31), two visit during Period 2 (June 1 to June 24), and two visits during Period 3 (June 25 to July 17). Each visit was at least 5 days apart. Surveys of the sites were conducted during morning hours (prior to 10:00 a.m.) and when the temperature exceeded 13° C (55 °f). Less than 3 km of habitat were surveyed per day.

Surveys were conducted within all potential habitat patches. If a singing flycatcher was not heard in an area after 1 to 2 minutes, a permitted biologist played a taped vocalization for 15 to 30 seconds and observed the area for responding flycatchers. This was repeated every 20 to 30 meters. If a flycatcher was detected, tape playing was discontinued.

Any flycatcher observations would be recorded in a field notebook, and GPS readings of the locations were taken during the surveys. If this species was observed, their behavior, numbers, and locations of paired or unpaired birds; ages; and sexes of encountered flycatcher would be noted. The biologist also checked for leg bands and if present the color combination of the bands were recorded.

VII. RESULTS

In order to adequately cover the five aforementioned survey sites, Ms Kidd and Mr. Berkley conducted surveys on 8 days between April 12, 2013 and July 16, 2013 (Table 1). Based on the level of effort and environmental conditions all surveys were considered valid as they followed published protocols. In total, three (3) male, one female and one juvenile least Bell's vireos were detected during the 2013 survey season. No SWWF were detected.

SUBSTATION

This survey area, in its current condition, is only marginally suitable for the LVBI and not suitable for the SWWF. When this site was being artificially irrigated, the pond was likely suitable for both of these species. Now this site is likely only suitable for "overflow" individuals from the nearby Temescal Creek during years of high-productivity. Bird activity was usually high in this area during the surveys as the mature trees provide good nesting and foraging habitat for a variety of species. Of interest, yellow warblers (*Setophaga petechial*); a California species of special concern, was detected on a few occasions here. Also, there was evidence of a barn owl (*Tyto alba)* nest within a large fan palm on the site. No SWWFs or LBVI were observed or detected in this survey area during the 2013 season.

SEEP

This area supported suitable foraging or breeding habitat for LBVI, however the limited size of the patch is likely not sufficient to support breeding pairs. If this patch of habitat was located closer to Temescal Creek, the probability of a pair using this feature would be higher. No LBVI or SWWF were detected or observed within this feature during the 2013 season. Other bird activity was relatively high; however the diversity was more similar to what would be expected in Sage Scrub habitat. Of note, this site has a raptor nest in a mature willow tree. A female red-tailed hawk (*Buteo jamaicensis*) was seen sitting on the nest during the first survey (April 12), however, it did not appear that she was incubating eggs or young chicks and no chicks were observed in the nest. The red-tailed hawk was not observed on the nest on subsequent visits. On one of the following surveys a great horned owl (*Bubo virginianus*) flushed from the

habitat and perched on a nearby rock outcrop. It is not known if this individual is using the habitat for nesting or just roosting.

The adjacent sage scrub habitat within this survey area supported three sensitive species: rufous-crowned sparrow (*Aimophila ruficeps canescens)*, Bell's sage sparrow (*Artemisiospiza belli belli*) and red-diamond rattlesnake (*Crotalus ruber*).

SAN JACINTO RIVER-EAST

This site supported what could be considered the best habitat within the survey area. There was flowing water on most visits and it is dominated by native riparian vegetation. Bird activity was high during all of the surveys and one pair of LBVI was detected on all but the last survey. It was determined that at least one nest successfully fledged young, as an adult male, female and single juvenile were observed within the same immediate area. Other nesting activity was also high at this site with numerous species of birds all nesting in the area. There was evidence of a homeless encampment in the vegetation however it did not appear to be in use during the 2013 survey season. Yellow warblers were also detected within this survey area and presumed to be nesting.

SAN JACINTO RIVER-WEST

This survey area is connected to SJR-east, however the two areas are separated by Auto Center Drive bridge. This area contains a broader arroyo habitat with the majority of the riparian habitat occurring on the southeastern bank of the river. A bike trail and regular human activity was evident within this area. At least one homeless camp was found within a stand of salt cedars. The survey area had noticeably more non-native vegetation and the broad sandy wash provided habitat for different avian and wildlife species than those found upstream. No LBVI or SWWF were observed/detected within this area. No sensitive bird species were detected, however numerous San Diego black-tailed jackrabbits (*Lepus californicus bennettii*) were observed within the wash. At least 6 individuals were observed during one site visit in May. This is a California species of special concern.

VINE STREET

The proposed impact area for this survey site is technically to the southeast of the majority of the riparian habitat, however suitable habitat within the patch of riparian woodland was surveyed well beyond the impact area in order to complete a comprehensive analysis of the resources associated with the riparian feature. Within this survey area, two male LBVI were detected on all but the last two surveys. No evidence of nesting or females was observed. It is presumed that these two males were unmated. No other sensitive wildlife species were detected in this survey area.

Table 1. Survey Data

Survey #	Date	Surveyor	Start Time	Stop Time	Weather	Temp. Range (°f)	LBVI Detected	WIFL Detected	Location of Observations
1	4/12/13	Nina Kidd(DW)	0800	1225	100% OC in early morning, then clearing to hazy by 1100	55-68	2	N/A	SJR East (1), Vine St.(1)
2	4/23/13	Nina Kidd	0730	1105	100% OC in early morning, then clearing by 0930	56-69	3	N/A	SJR East (1), Vine St.(2)
3	5/3/13	Nina Kidd (JD)	0730	1100	Hazy early, then clear and warm by 1000.	63-78	3	N/A	SJR East (1), Vine St.(2)
4*	5/15/13	Jason Berkley	0600	0940	90% overcast, then clearing by 0830	58-74	3	0	SJR East (1), Vine St.(2)
5*	6/03/13	Jason Berkley	0600	1000	100% overcast in early morning then clearing to partly cloudy 10%.	58-72	3	0	SJR East (1), Vine St.(2)
6*	6/24/13	Jason Berkley	0530	1000	100% OC, humid and mild winds with gusts up to 8mph.	58-65	5	0	SJR East (3), Vine St. (2)
7*	7/05/13	Jason Berkley	0515	0835	Between 80-100% OC throughout survey	58-68	1	0	SJR East (1)
8*	7/16/13	Jason Berkley	0530	0940	80% Overcast throughout survey.	64-80	0	0	N/A

DW-Doug Willick, JD- John Donoghue. Additional surveyors were along for safety and did not collect additional data.

*indicates dates when SWWF surveys were conducted in conjunction with LBVI surveys.

Table 2. Locations of LBVI (UTM- Zone 11S)

San Jacinto River East	Northing	Easting
LBVI Male	471976.69 m E	3724986.61 m N
LBVI Female	471956.29 m E	374969.12 m N
LBVI Juvenile	4171956.29 m E	374969.12 m N
Vine street		
LBVI Male A	472885.00 m E	3722107.00 m N
LBVI Male B	472842.00 m E	3722322.00 m N
When LBVI were detected in numerous locations, the central point of the polygon is given.		

BROWN-HEADED COWBIRDS AND INVASIVE SPECIES

Brown-headed cowbirds (*Molothrus ater*)(BHCB) were not detected (seen or heard) during any of the surveys in 2013. This is a decline in observations during 2011 and 2012 where BHCBs were detected at several of the sites. It was noted in previous reports that the Substation site, when operating as a horse ranch, had BHCBs. The current lack of horses or other livestock on the site may be a contributing factor to the absences of BHCBs at the substation site. No cowbird traps were noted at any of the survey locations.

Bullfrogs (*Rana catesbeiana*) were heard within the ponded area of the San Jacinto River East survey area. Although this likely has little direct impact of LBVI, this invasive species has an impact on the ecosystem as a whole and could cause negative indirect impacts to the LBVI. The only other invasive species detected within the survey areas were rock doves (*Columba livia*) and European starlings (*Sternus vulgaris*).

There were two invasive plant species within the survey area: giant reed (*Arundo donax*) and salt cedar (*Tamarix* sp.). Neither of these species was found to be heavily abundant in the survey area with the exception of the Vine Street site, which is dominated by salt cedar. Although an invasive plant, salt cedar is regularly used by flycatchers and other riparian birds for foraging and nesting. Although this species out-competes native plant species, the small areas of this species does not likely have a significant impact on the population of sensitive birds in the area. However if this species should spread and dominate the area, the diversity of wildlife will likely decrease due to changes in chemical composition of the soils in relation to leaf decomposition rates affecting stream macro-invertebrates (Baily et al, 2001). The result of decreased abundance and diversity of macro-invertebrates likely affects species at higher trophic levels.
Giant reed was not found in great density however, it was found within the San Jacinto River. The presence of giant reed has a greater effect on ecosystem health as the diversity and abundance of leaf/ aerial insects are significantly decreased in areas over run by giant reed (Herrera and Dudley, 2003). For insect-eating birds such as the willow-flycatcher and least Bell's vireo, the spread of giant reed could cause a significant decrease in food availability.

VIII. CONCLUSION

CERTIFICATION: *I hereby certify that the statements furnished above and in the attached Figures present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.*

Date: 8/28/2013 **Signed:** _____

Nina J. Kidd

Date: 8/28/2013 **Signed:** _____

Jason Berkley

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APPENDIX A- FIGURES

Figure 1. Regional Location Map

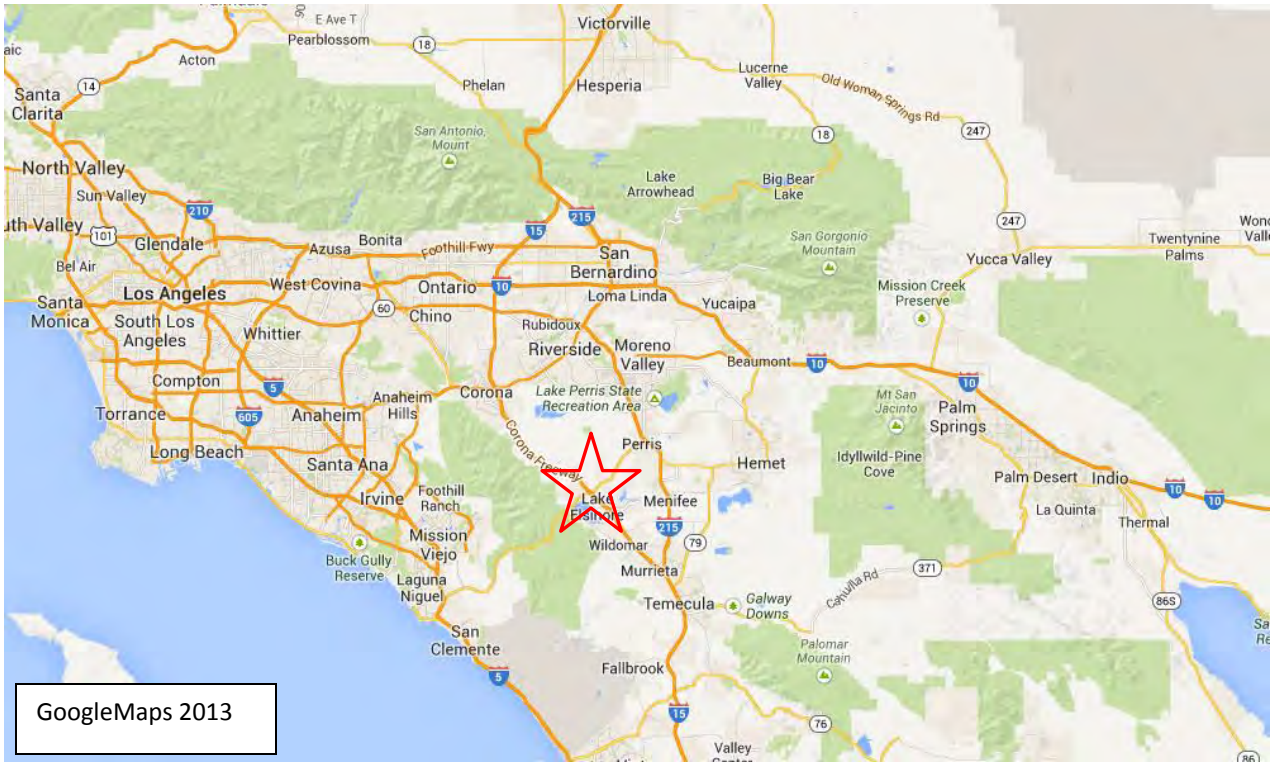


Figure 2. Overview of Survey Areas



Figure 3. Substation and Seep Survey Areas on Alberhill, CA USGS Topo Map

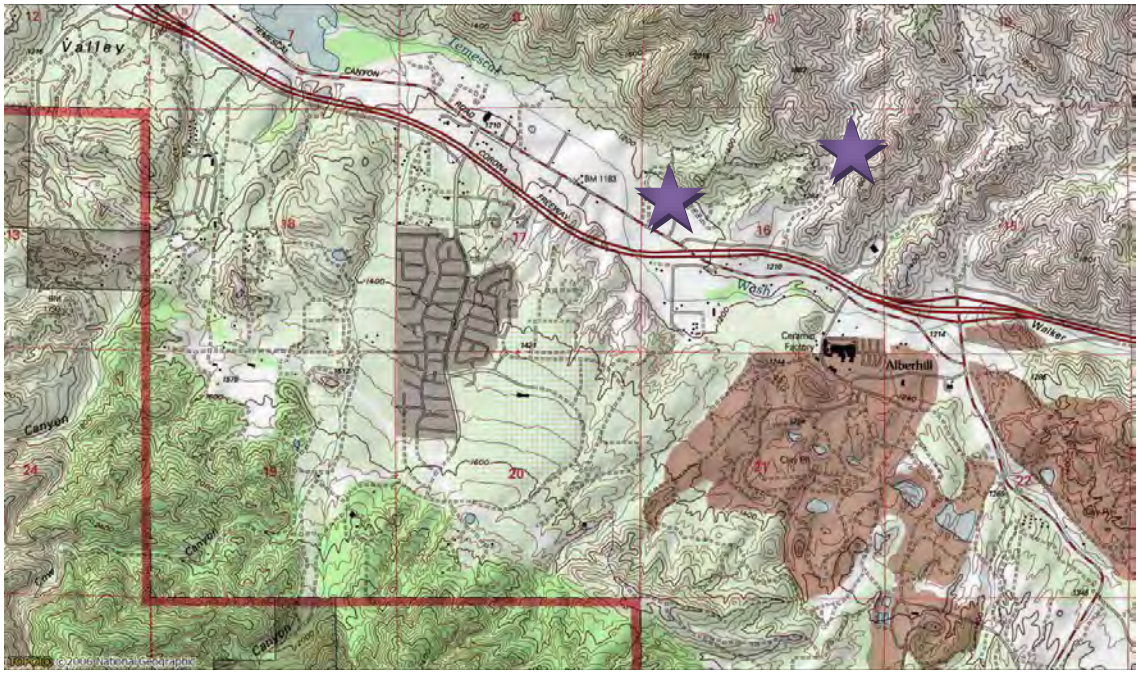


Figure 4. Substation Survey Area



Figure 5. Seep Survey Area



Figure 6. San Jacinto River and Vine Street Survey Areas on Lake Elsinore, CA USGS Topo Map

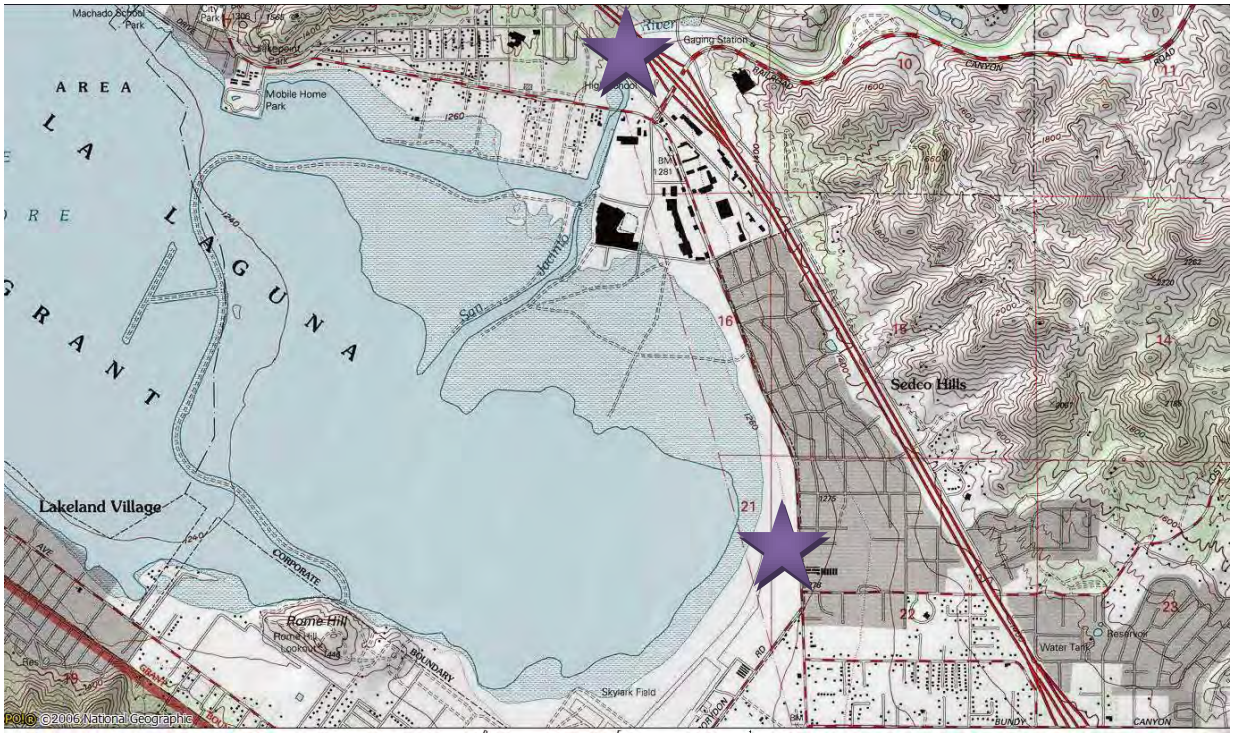


Figure 7. San Jacinto River East (yellow) and West (blue) (proposed transmission line shown in black)



Figure 8. Vine Street Survey Area (Proposed Transmission line in black, laydown yard in red)



APPENDIX B- AVIAN COMPENDIUM

Scientific Name	Common Name
Ardeidae	**Herons**
Ardea herodias	great blue heron
Ardea alba	great egret
Bubulcus ibis	cattle egret
Anatidae	**Waterfowl**
Anas platyrhynchos	mallard
Cathartidae	**New World Vultures**
Accipitridae	**Hawks**
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed hawk
Falconidae	**Falcons**
Falco sparverius	American kestrel
Phasianidae	**Pheasants and Quails**
Callipepla californica	California quail
Charadriidae	**Plovers**
Charadrius vociferus	killdeer
Laridae	**Gulls and Terns**
Larus californicus	California gull
Columbidae	**Pigeons and Doves**
**Columba livia*	rock dove
Zenaida macroura	mourning dove
Tytonidae	**Barn Owls**
Tyto alba	barn owl
Strigidae	**True Owls**
Bubo virginianus	great horned owl
Apodidae	**Swifts**
Aeronautes saxatalis	white-throated swift
Trochilidae	**Hummingbirds**
Archilochus alexandri	black-chinned hummingbird

Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
Picidae	**Woodpeckers**
Picoides nuttallii	Nuttall's woodpecker
Colaptes auratus	northern flicker
Tyrannidae	**Tyrant Flycatchers**
Contopus sordidulus	western wood-pewee
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Myiarchus cinerascens	ash-throated flycatcher
Tyrannus vociferans	Cassin's kingbird
Hirundinidae	**Swallows**
Stelgidopteryx serripennis	northern rough-winged swallow
Petrochelidon pyrrhonota	cliff swallow
Corvidae	**Jays and Crows**
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Aegithalidae	**Bushtits**
Psaltriparus minimus	bushtit
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Muscicapidae	**Kinglets, Gnatcatchers, Thrushes, and Babblers**
Catharus guttatus	hermit thrush
Chamaea fasciata	wrentit
Mimidae	**Thrashers**
Toxostoma redivivum	California thrasher
Ptilogonatidae	**Silky Flycatchers**
Phainopepla nitens	phainopepla
Sturnidae	**Starlings**
**Sturnus vulgaris*	European starling
Vireonidae	**Vireos**
§Vireo bellii pusillus	least Bell's vireo
Emberizidae	**Wood Warblers, Tanagers, Buntings, and Blackbirds**
§Setophaga petechia	yellow warbler

Setophaga coronata	yellow-rumped warbler
Geothlypis trichas	common yellowthroat
Pheucticus melanocephalus	black-headed grosbeak
Piranga ludoviciana	western tanager
Passerina caerulea	blue grosbeak
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
§Aimophila ruficeps canescens	Southern California rufous-crowned sparrow
§Artemisiospiza belli belli	Bell's sage sparrow
Melospiza melodia	song sparrow
Zonotrichia leucophrys	white-crowned sparrow
Agelaius phoeniceus	red-winged blackbird
Icterus bullockii	Bullock's oriole
Icterus cucullatus	hooded oriole
Fringillidae	**Finches**
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch

*Indicates non-native species
§ Indicates Sensitive Species

F6
2014 Focused Species Survey
Reports

2014 Least Bell's Vireo & Southwestern Willow Flycatcher Survey Results for the Alberhill System Project

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Figure 5. Seep Survey Area ..... **Error! Bookmark not defined.**

Figure 6. San Jacinto River and Elsinore Survey Areas on Lake Elsinore, CA USGS Topo Map ..... **Error! Bookmark not defined.**

Figure 7. San Jacinto River (yellow) and proposed transmission line shown in black **Error! Bookmark not defined.**

Figure 8. Elsinore Survey Area (Proposed Transmission line in black, laydown yard in red) **Error! Bookmark not defined.**

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I. INTRODUCTION

Kidd Biological, Inc. (KBI) was contracted by AECOM to conduct protocol breeding season surveys for the least Bell's vireo (*Vireo bellii pusillus*), (LBVI), and southwestern willow flycatcher (*Empidonax traillii extimus*), (SWWF). The surveys were performed to satisfy requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), under which LBVI and SWWF are considered covered species. However, under 6.1.2 of the MSHCP, surveys for these species must be conducted when impacts to riparian habitats are expected. The surveys followed protocol established for these species by the U.S. Fish and Wildlife Service (USFWS). KBI employee, Jason Berkley (TE 009015-3), conducted all five protocol SWWF surveys concurrently with the eight least Bell's vireo surveys.

II. PROJECT OBJECTIVES

Southern California Edison (SCE) proposes to construct the Project to serve current and projected demand for electricity and maintain electric system reliability in southwestern Riverside County (County), including the cities of Lake Elsinore, Canyon Lake, Perris, Menifee, Murrieta, Murrieta Hot Springs, Temecula, and Wildomar as well as the surrounding unincorporated areas.

The Project includes the following Project components: the proposed Alberhill Substation, the proposed 500kV Transmission Lines (T/Ls), the proposed 115kV sub T/L, the alternative 115kV sub T/L, and proposed and alternative Bulk Power and Sub-transmission laydown yards.

III. SURVEY LOCATIONS

Generally the proposed project is located within Western Riverside County in Southern California, between Corona and Murrieta (Appendix A, Figure 1). The surveys for the LBVI and SWWF were divided into 5 distinct survey areas. These are described in more specific detail below:

Alberhill Substation
This site is located north of Interstate 15 and Temescal Canyon Road, approximately 1.5 miles southeast of Lee Lake. It is located in Section 16 of Township 5 south, Range West of the Alberhill, CA 7.5 minute USGS Topographic Quadrangle (Appendix A, Figures 2, 3 & 4).

Seep (500 kV Area)
This survey area is just east of the Alberhill substation survey area and is within the same Section of the Alberhill Quadrangle. It is approximately ½ mile up an unnamed canyon, beyond the end of Black Powder Road (Appendix A, Figures 2, 3 & 5).

San Jacinto River (115 kV Area)
The alignment follows Auto Center Drive which is located approximately 500 feet west of Interstate 15. The survey area is confined to the suitable habitat within the San Jacinto River between Interstate 15, west 1,000 feet towards Lakeshore Drive. The survey area is bisected by Auto Center Drive. Generally it is south of Highway 74 and approximately 1.5 miles east of Lake Elsinore. It can also be described as

occurring within Section 9 of Township 6 South, Range 4 West of the Lake Elsinore, CA USGS topographic quadrangle (Appendix A, Figures 2, 6 & 7).

Elsinore (115 kV Area)

The Elsinore survey area is the furthest south of the 5 survey areas and is located west of Interstate 15 and Mission Trail Road, approximately 1.5 miles south of Diamond Drive/Railroad Canyon and 0.5 miles north of Corydon Street, near the south end of Lake Elsinore. The riparian habitat is located at the intersection of Vine Street and Mission trail. It can also be described as occurring within Section 22 of Township 6 South, Range 4 West of the Lake Elsinore, CA USGS topographic quadrangle (Appendix A, Figures 2, 6 & 8).

IV. HABITAT DESCRIPTIONS

Habitat descriptions were taken from previously prepared reports (AECOM 2012, Kidd Biological, Inc. 2013, MSHCP 2003) and from Holland (1986).

Alberhill Substation

This survey area supports a small patch of riparian habitat associated with a pond inside a horse track of an abandoned horse ranch/training facility. This pond was likely artificially irrigated with well or municipal water and likely holds water after large rain events and in years of high rainfall. During the surveys the area held little to no water. The vegetation is comprised mostly of ornamentals such as Mexican fan palms (*Washingtonia robusta*), coral trees (*Erythrina* sp.) and tree of heaven (*Ailanthus* sp.) however there are also areas of willows (*Salix* sp.) and mulefat (*Baccharis salicifolia*) as well as some wetland vegetation such as bulrush (*Scirpus* sp.) and cattails (*Typha* sp.). Although the habitat here is generally marginal, the proximity to Temescal Wash makes the possibility of riparian bird species to use this area likely during years of high nesting production.

Seep (500kV Area)

This small patch of habitat is to the east of the substation, up a long canyon. The lower reaches of this canyon where the project area is located almost completely lacks riparian vegetation other than this ponded area which may be fed by a seep. This area is quite small and measures approximately 150' x 250' which contains dense riparian vegetation comprised of arrowweed (*Pluchea sericea*) and mulefat scrub, mature willow and elderberry (*Sambucus mexicana*) trees and a dense understory of mugwort (*Artemesia douglasiana*) and other annuals. The substrate within this vegetated area is rocky and in some areas the main channel was comprised of granite.

San Jacinto River (115 kV)

This survey area can be divided into two sub-areas based on difference in habitat. The area east of the Auto Center Drive bridge contains relatively mature willow and cottonwood riparian woodland which occurs in somewhat narrow stands bordering the San Jacinto River. The San Jacinto River, along this stretch carried running and ponded water throughout most of the survey period (April-June). The ponded area contained surface water until the 6th survey (June 23). Of all the survey areas, this one is possibly the highest quality for both LBVI and SWWF due to the density of the vegetation and flowing water. It also contains a well-developed structure with a dense understory and minimal non-native vegetation. It is

limited though in its quality by the proximity to Interstate 15 and other development as well as just the relatively small area of good habitat.

The San Jacinto River survey area to the west of Auto Center Drive contains a broader and more open section of the San Jacinto River, and appears as a significantly more disturbed riparian community. Although it still supports a few mature willow trees, it is dominated by nonnative vegetation, including salt cedar (*Tamarix ramosissima*) and giant reed (*Arundo donax*). The upper banks of this survey area were also dominated by ruderal vegetation (e.g., mustard [*Brassica* sp.], tocalote [*Centaurea melitensis*], and castor bean [*Ricinus communis*]). This area also had a significant patch of arrowweed on the upper banks. This site was considered marginal for LBV, and unsuitable for SWWF.For most of the surveys this area either had flowing water or the sandy wash was wet. By June 23th (Survey # 6), the water was no longer flowing.

Elsinore (115 kV)

The impact area for this survey area is a very small, consisting primarily of a few young willow trees growing in an otherwise open field. However, approximately 150 feet west of the impact area, there is fairly extensive riparian scrub habitat. This habitat is characterized by a mix of young to moderate aged willows and large stands of salt cedar. Eucalyptus woodlands occur to the north of the riparian area and to the west is a large Off Highway Vehicle park. The habitat quality of this survey area was considered moderate to poor, due to the limited amount of native riparian vegetation, the relatively dry nature of the area, and the disturbance associated with homeless encampments and illegal dumping. Although the majority of suitable habitat is outside the impact area, the adjacent areas were surveyed as a prudent measure.

v. LEAST BELL'S VIREO

SPECIES DESCRIPTION, DISTRIBUTION, AND STATUS

The vireo is a small greenish-gray songbird with a white underbelly, two white wingbars, and white spectacles across the lores. The vireo was once widespread throughout the Central Valley and other low elevation river valleys of California. Historically, the LBVI's breeding range extended from the interior of northern California to northwestern Baja California. The vireo typically prefers riparian areas dominated by willows of mixed age composition. These areas frequently include other trees such as western cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*), with a dense understory of young willows, mule-fat, California wild rose (*Rosa californica*), and a variety of other shrubby species. Within western Riverside County the core populations are primarily Prado Basin and the Santa Ana River, with other smaller populations in Temescal Wash (including Alberhill Creek), Mockingbird Canyon, Murrieta Creek, Temecula Creek, Lake Skinner (including Rawson Canyon), Vail Lake, Wilson Creek, and San Timoteo Canyon. According to the MSHCP "other geographic locations that are recorded within the U.C. Riverside database and by the USFWS include: Lake Elsinore, March ARB, Meadowbrook, Canyon Lake, De Luz Creek, Potrero Creek, Bautista Creek, and Reche Canyon (USFWS 1998)"

Loss and degradation of breeding habitat has been the greatest contributor to the decline of the LBVI and SWWF. Habitat conversion for agricultural purposes has removed much of the original riparian woodland, and flood control measures and channelization have further depleted the riparian habitats used by the LBVI and SWWF as well as other riparian birds. The significant reduction in the population size and range

of the vireo resulted in it being listed as a state endangered species in June 1980, and federally listed as endangered in May 1986. Critical Habitat for this species was designated in 1994; however, no critical habitat occurs within the survey areas.

LBVI Survey Methods

Presence/absence surveys were conducted according to the January 19, 2001 USFWS *Least Bell's Vireo Survey Guidelines*. All potential LBVI habitat and riparian areas within the study sites were surveyed eight (8) times during the breeding season with at least 10 days between survey visits for each site. The surveys were conducted during the morning hours (prior to 11:00 a.m., however on the first survey, the survey lasted until 11:15 due to some access issues) and when the temperature exceeded 13 degrees Celsius (° C) or 55 degrees Fahrenheit (° F). Less than 3 linear kilometers (km) of habitat were surveyed per day. Biologists listened for vireo songs, calls, whisper songs, scolds and looked for adults and juveniles. Any nesting behavior was also noted.

Vireo observations were recorded in a field notebook, and GPS readings of the locations were taken during the surveys. Numbers and locations of paired or unpaired territorial males, and the ages and sexes of encountered vireos (when discernible) were noted. The biologist also checked for colored leg bands when vireos were found.

VI. SOUTHWESTERN WILLOW FLYCATCHER

SPECIES DESCRIPTION, DISTRIBUTION, AND STATUS

The SWWF is a small, insectivorous passerine that migrates north in the spring from South America, Mexico, and Central America, to breed in the southwestern desert riparian habitats of California, Arizona, New Mexico, and Texas. Within western Riverside County it has been recorded as a single location or very few locations currently or historically within Temescal Wash/Alberhill Creek, Canyon Lake, Temecula Creek, Box Springs Mountains, Bautista Creek, Vail Lake, Hemet Lake (old record), Santa Rosa Plateau Nature Reserve, Lake Mathews, Lake Skinner, Lake Perris, and Potrero Creek (Riverside County 2003).

The SWWF has a grayish-green back, whitish throat, pale yellowish belly, and two white wingbars. Like the LBVI, the SWWF occurs in riparian woodland habitat that is characterized by a dense growth of willows, mulefat, arrowweed, buttonbush (*Cephalanthus* sp.) cottonwood, sycamore, and tamarisk. In addition to willow riparian woodland, the SWWF also nests in coast live oak woodland (*Quercus agrifolia*) on the upper San Luis Rey River, San Diego County, California; in dense stands of tamarisk on the lower Colorado River, Imperial and Riverside Counties, California; and in stands of mixed willow and white alder (*Alnus rhombifolia*) on Mill Creek in San Bernardino County, California. Surface water or saturated soils are usually present in or adjacent to nesting thickets. The southwestern subspecies of willow flycatcher was federally listed as endangered in February 1995 (USFWS 1995). Critical habitat was established in 2005, and then revised in 2013.

SWWF Survey Methods

Presence/absence surveys were conducted according to the July 11, 2000 revised protocol for project-

related surveys and the general guidelines described by Sogge et al. (2010). All potential SWWF habitat and riparian areas within the survey area were surveyed five times: one visit during Period 1 (May 15 to May 31), two visit during Period 2 (June 1 to June 24), and two visits during Period 3 (June 25 to July 17). Each visit was at least 5 days apart. Surveys of the sites were conducted during morning hours (prior to 10:00 a.m.) and when the temperature exceeded 13° C (55 °f). Less than 3 km of habitat were surveyed per day.

Surveys were conducted within all potential habitat patches. If a singing SWWF was not heard in an area after 1 to 2 minutes, a permitted biologist played a taped vocalization for 15 to 30 seconds and observed the area for responding SWWFs. This was repeated every 20 to 30 meters. If a SWWF was detected, tape playing was discontinued.

Any SWWF observations would be recorded in a field notebook, and GPS readings of the locations were taken during the surveys. If this species was observed, their behavior, numbers, and locations of paired or unpaired birds; ages; and sexes of encountered SWWF would be noted. The biologist also checked for leg bands and if present the color combination of the bands were recorded.

VII. RESULTS

In order to adequately cover the five aforementioned survey sites, Mr. Berkley conducted surveys on 8 days between April 11, 2013 and July 15, 2013 (Table 1). Based on the level of effort and environmental conditions all surveys were considered valid as they followed published protocols. In total, four (4) males, one female and one juvenile LBVIs were detected during the 2014 survey season. One WIFL was detected during a single survey. Incidentally, a pair of California gnatcatchers (*Polioptila californica californica*) (CAGN), a federally threatened species, was observed at the seep site.

SUBSTATION

This survey area, in its current condition, is only marginally suitable for the LVBI and not suitable for the SWWF. When this site was being artificially irrigated, the pond was likely suitable for both of these species. Now this site is likely only suitable for "overflow" individuals from the nearby Temescal Wash during years of high-productivity. Bird activity was usually high in this area during the surveys as the mature trees provide good nesting and foraging habitat for a variety of species. No SWWFs were observed or detected in this survey area during the 2014 season however a single male LBVI was detected during the 6th survey on June 23, 2014. It was also reported that an SCE biologist monitoring the site during geotechnical study activities heard the vireo singing (personal Communication Matt Malle of AECOM and SCE May 2014). The individual was not detected on subsequent surveys. It is assumed this bird did not breed within the substation habitat. Of interest, yellow warblers (*Setophaga petechial*); a California species of special concern, was detected on a few occasions here. Also, there was evidence of a barn owl (*Tyto alba)* nest within a large fan palm on the site.

SEEP

This area supports suitable foraging or breeding habitat for LBVI, however the limited size of the patch is likely not sufficient to support a breeding pair. If this patch of habitat was located closer to Temescal Creek, the probability of a pair using this feature would be higher. No LBVI or SWWF were detected or observed within this feature during the 2014 season. Other bird activity was relatively high; however the

diversity was more similar to what would be expected in Sage Scrub habitat. Of note, a pair of CAGN was detected during the 6th survey on June 23rd. The pair was observed foraging in both the upland and riparian habitat associated with the seep. No nesting behavior was observed and no gnatcatchers were detected on previous or subsequent visits.

San Jacinto River

The eastern portion of site supported what could be considered the best habitat within the survey area. There was flowing water on most visits and it is dominated by native riparian vegetation. Bird activity was high during all of the surveys and one pair of LBVI was detected on all but the last survey. It was determined that at least one nest successfully fledged young, as an adult male, female and single juvenile were observed within the same immediate area. Other nesting activity was also high at this site with numerous species of birds all nesting in the area. Yellow warblers were also detected within this survey area and presumed to be nesting. A WIFL was observed during the first of the focused surveys for SWWF, on May 15, 2014. It was uncertain at the time of the survey if this flycatcher was the federally-listed subspecies as residency status cannot be determined during the first survey. Because this bird did not breed onsite and was not detected during subsequent surveys, it can only be classified to the species level: *Empidonax traillii*. It is assumed this WIFL was migrating through the site. No LBVI or SWWF were observed/detected west of the Auto Center Drive Bridge where the quality of the habitat is relatively low.

Elsinore

The proposed impact area for this survey site is technically to the southeast of the majority of the riparian habitat, however suitable habitat within the patch of riparian woodland was surveyed well beyond the impact area in order to complete a comprehensive analysis of the resources associated with the riparian feature. Within this survey area, two male LBVI were detected on the 3rd and 4th surveys on May 2nd and 15th. Only a single male was detected on the other surveys. No evidence of nesting or females was observed. It is presumed that these two males were unmated. No other sensitive wildlife species were detected in this survey area.

Table 1. Survey Data

Survey #	Date	Surveyor	Start Time	Stop Time	Weather	Temp. Range (°f)	LBVI Detected	SWWF Detected	Location of Observations
1	4/11/13	Jason Berkley	0615	1115	no wind and clear skies, wind increasing to 2 mph.	54-85	2	N/A	SJR (2)
2	4/21/13	Jason Berkley	0630	1100	No wind, clear skies	54-70	1	N/A	SJR (1), Elsinore (1)
3	5/2/13	Jason Berkley	0600	1000	No wind, clear skies	57-81	4	N/A	SJR (2), Elsinore (2)
4*	5/15/13	Jason Berkley	0600	1030	No wind, clear skies	68-93	3	0[1]	SJR (1 LBVI, 1 WIFL[2]), Elsinore(2 LBVI)
5*	6/03/13	Jason Berkley	0600	1030	5% overcast, wind 0-2 mph	58-76	2	0	SJR (1), Elsinore.(1)
6*	6/23/13	Jason Berkley	0700	1100	Clear skies, wind 1-4 mph	63-80	5	0	SJR (3), Elsinore (1), Substation (1)
7*	7/02/13	Jason Berkley	0515	0835	Between 80-100% OC throughout survey	58-68	2	0	SJR (1), Elsinore (1)
8*	7/15/13	Jason Berkley	0600	1045	10% Overcast, 1-2 mph.	68-91	2	0	SJR (1), Elsinore. (1)

*indicates dates when SWWF surveys were conducted in conjunction with LBVI surveys.

[1] A WIFL was detected, however due to the timing of the observation and the absence on subsequent surveys; it is classified as the state endangered *Empidonax traillii,* and not the federally listed *E. traillii extimus.*

Table 2. Locations of Sensitive Avian Species (UTM- Zone 11S)

San Jacinto River	Northing	Easting
LBVI Male	471976.69 m E	3724986.61 m N
LBVI Female	471956.29 m E	374969.12 m N
LBVI Juvenile	471956.29 m E	374969.12 m N
WIFL Male	471997.00 m E	3724996.00 m N
Elsinore		
LBVI Male A	472878.00 m E	3722244.00 m N
LBVI Male B	472793.00 m E	3722387.00 m N
Substation		
LBVI Male	461715.00 m E	3733025.00 m N
Alberhill Seep		
CAGN pair	462789.00 m E	3733344.00 m N
When LBVI were detected in numerous locations, the central point of the polygon is given.		

Other Sensitive Species Observed

This survey focused on two species, the LBVI and SWWF; however, incidental observation(s) of all sensitive species were documented. There are various definitions of "sensitive" in accordance with State and Federal Agencies. The following is a brief summary of the status of the species that were observed on site (all definitions were taken directly from State of California Department of Fish and Wildlife Biogeographic Data Branch's Special Animals list (January 2011) unless otherwise indicated:

Federally Endangered (FE): "The classification provided to an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range." (USFWS 2014)

Federally Threatened (FT): "The term "threatened species" means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range - - as defined in the Endangered Species Act." (USFWS 2014)

State Endangered (SE): animals or plants that are in serious danger of becoming extinct throughout all, or a significant portion, of their range due to one or more causes, including loss of habitat, over-exploitation, competition or disease.

CDFW California Species of Special Concern (**SSC):** The Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "SSC" is to halt or reverse their decline early enough to secure their long term viability.

CDFW: Watch List (DFGWL): The birds on this Watch List are 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously state or federally listed and now are on neither list; or 3) are on the list of "Fully Protected" species.

USFWS Bird of Conservation Concern (BCC): The goal of the Birds of Conservation Concern 2008 report is to accurately identify the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent our highest conservation priorities and draw attention to species in need of conservation action.

American Bird Conservancy (AWL): United States WatchList of Birds of Conservation Concern: The United States WatchList is a joint project between the American Bird Conservancy and the National Audubon Society. It reflects a comprehensive analysis of all the bird species in the United States. It reveals those in greatest need of immediate conservation attention to survive a convergence of environmental challenges, including habitat loss, invasive species, and global warming.

Sensitive species observed included:

Common Name	Scientific Name	Status	Survey Area Observed
Willow flycatcher	*Empidonax traillii*	SE, AWL	SJR
Least Bell's vireo	*Vireo bellii pusillus*	FE, SE	SJR, Substation, Elsinore
California gnatcatcher	*Polioptila californica californica*	FT, SSC, AWL	Seep
Costa's hummingbird	*Calypte costae*	AWL, BCC	Elsinore
Nuttall's woodpecker	*Picoides nuttallii*	AWL, BCC	Substation, Elsinore
Cooper's hawk	*Accipiter cooperii*	DFG-WL	Elsinore
Lawrence's goldfinch	*Spinus lawrencei*	AWL, BCC	Substation
Yellow warbler	*Setophaga petechia*	SSC, AWL	Substation, Elsinore., SJR

BROWN-HEADED COWBIRDS AND INVASIVE SPECIES

Brown-headed cowbirds (*Molothrus ater*)(BHCB) were not detected (seen or heard) during any of the surveys in 2014. It was noted in previous reports that the Substation site (2011 and 2012), when operating as a horse ranch, had BHCBs. The current lack of horses or other livestock on the site may be a contributing factor to the absences of BHCBs at the substation site. No cowbird traps were noted at any of the survey locations.

The only non-native wildlife species detected within the survey areas were rock pigeons (*Columba livia*) and European starlings (*Sternus vulgaris*). Neither of these birds poses a significant threat to the conservation of the LBVI or the SWWF.

There were two invasive plant species within the survey area: giant reed and salt cedar. Neither of these species was found to be heavily abundant in the survey area with the exception of the Elsinore survey area, which is dominated by salt cedar. Although an invasive plant, salt cedar is regularly used by SWWFs and other riparian birds for foraging and nesting. Although this species out-competes native plant

species, the small extent of salt cedar in this area does not likely have a significant impact on the population of sensitive birds in the area. However if salt cedar should spread and dominate a substantial portion of the southern willow scrub in the surrounding area, the diversity of invertebrates in the willow riparian habitat may decline. The result of decreased abundance and diversity of invertebrates likely affects species at higher trophic levels.

Giant reed was not found in great density, though it is present within the San Jacinto River. The presence of giant reed has a greater effect on ecosystem health as the diversity and abundance of leaf/aerial insects are significantly decreased in areas overrun by giant reed (Herrera and Dudley, 2003). For insect-eating birds such as the SWWF and LBVI, the spread of giant reed could cause a significant decrease in food availability.

VIII. CONCLUSION

A total of 6 LBVIs were detected during the surveys. These included one breeding pair, one juvenile, and three males which are assumed to be unpaired. Of the three males, two were observed on several visits to the Elsinore site and one male was detected on a single visit to the Substation site. Only the San Jacinto River survey area east of the Auto Center Drive Bridge contained a breeding pair of LBVI.

One WIFL was observed during the first SWWF protocol survey at the San Jacinto River site. This bird was not observed on subsequent visits and did not breed on the site.

A pair of CAGN was observed foraging near the Alberhill Seep site on June 23rd. This pair was not observed on any other visits to the site.

CERTIFICATION: *I hereby certify that the statements furnished above and in the attached Figures present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.*

Date: 8/16/2014 **Signed: _____**

Jason Berkley

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APPENDIX A- FIGURES

Figure 1. Regional Location Map

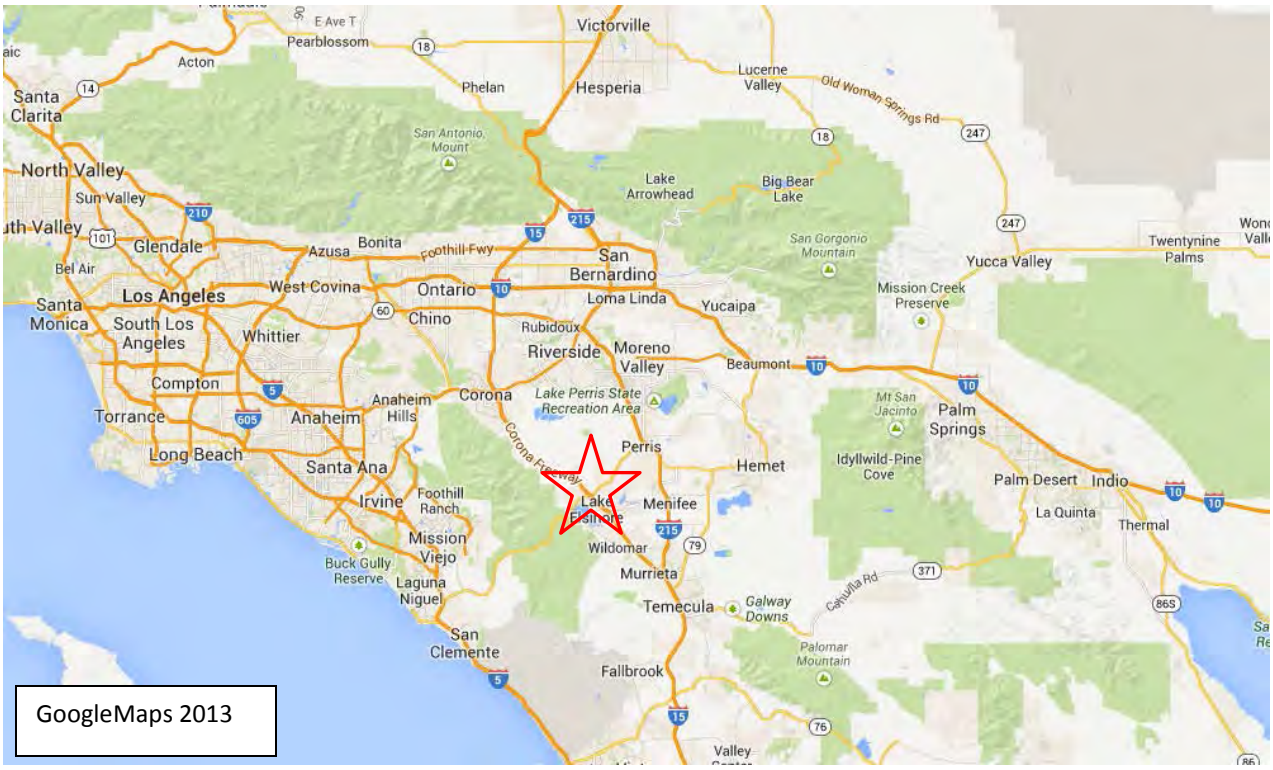


Figure 2. Overview of Survey Areas (Google Earth 2014)



Figure 3. Substation and Seep Survey Areas on Alberhill, CA USGS Topo Map

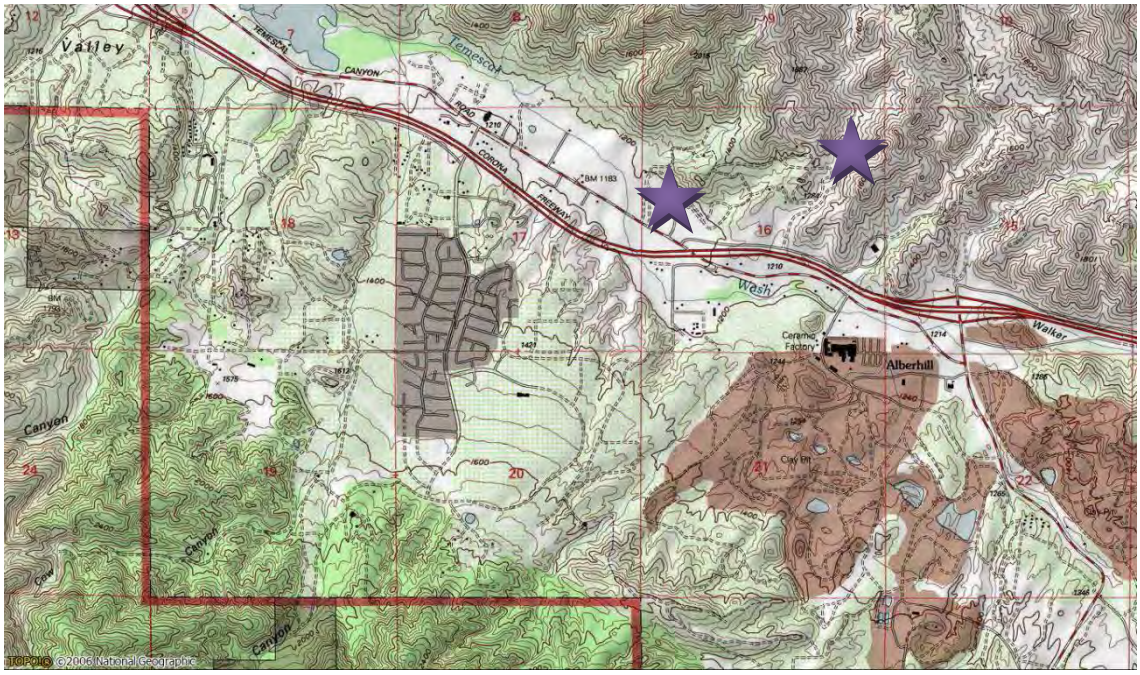


Figure 4. Substation Survey Area (LBVI Location Indicated) (Google Earth 2014)



Figure 5. Seep Survey Area (CAGN Location depicted) (Google Earth 2014)

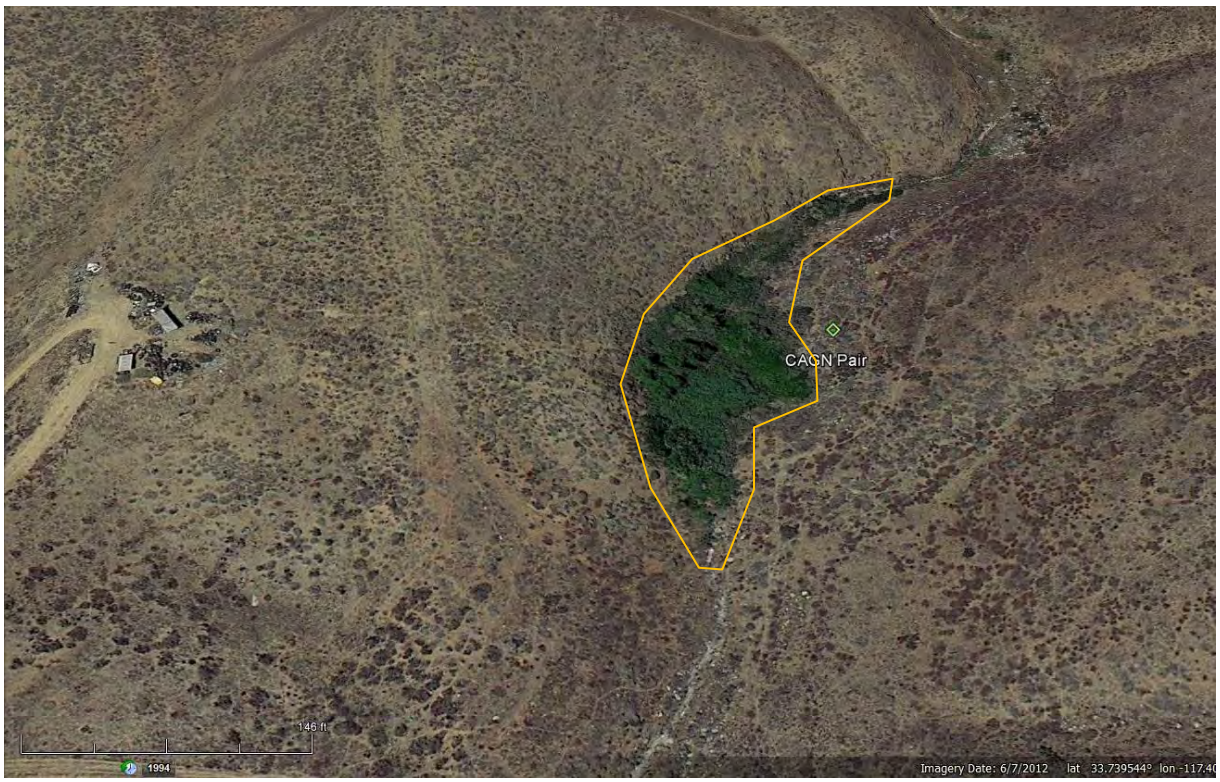


Figure 6. San Jacinto River and Elsinore Areas on Lake Elsinore, CA USGS Topo Map

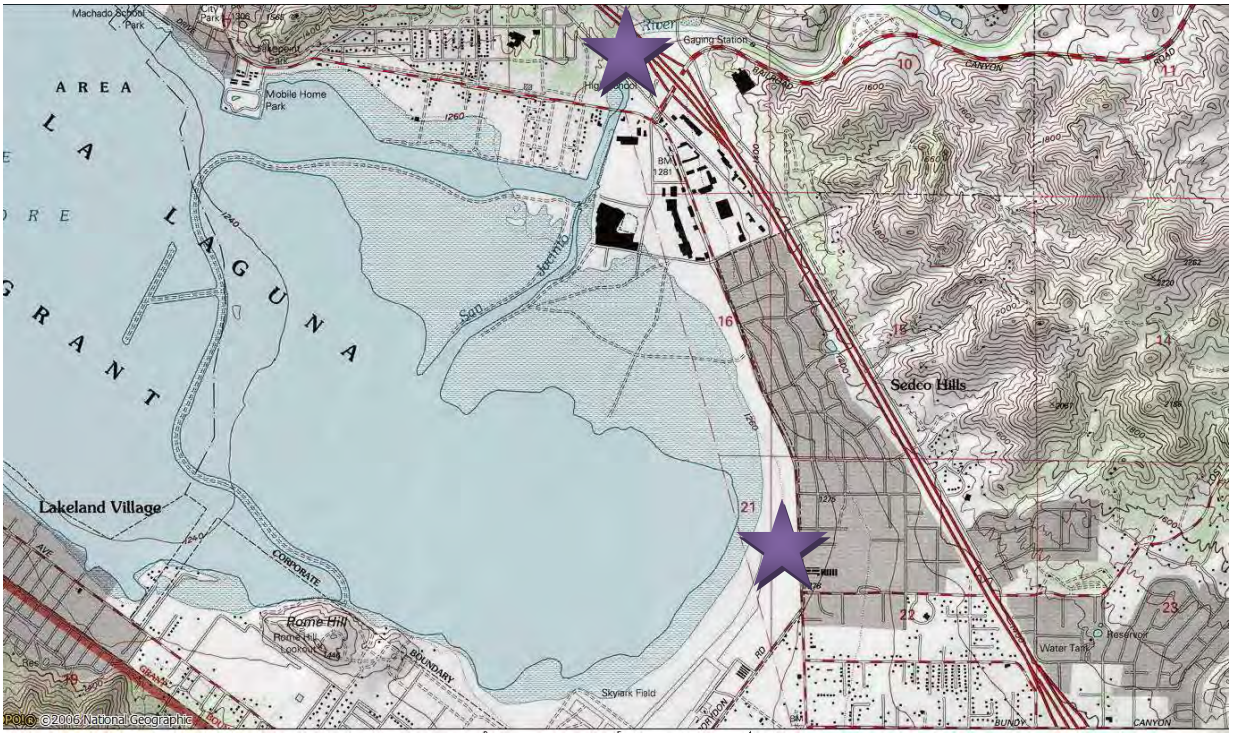


Figure 7. San Jacinto River Survey Area (yellow) and proposed transmission line shown in black (Google Earth 2014)



Figure 8. Elsinore Survey Area (Proposed Transmission line in black, laydown yard in red) (Google Earth 2014)



APPENDIX B- AVIAN COMPENDIUM

SCIENTIFIC NAME	COMMON NAME
Ardeidae	**Herons**
Ardea alba	great egret
Anatidae	**Waterfowl**
Anas platyrhynchos	mallard
Cathartidae	**New World Vultures**
Cathartes aura	turkey vulture
Accipitridae	**Hawks**
Accipiter cooperii	Cooper's hawk
Buteo lineatus	red-shouldered hawk
Buteo jamaicensis	red-tailed hawk
Falconidae	**Falcons**
Falco sparverius	American kestrel
Odontophoridae	**New World Quails**
Callipepla californica	California quail
Rallidae	**Rails, Coots and Gallinules**
Fulica americana	American coot
Columbidae	**Pigeons and Doves**
**Columba livia*	rock pigeon
Apodidae	**Swifts**
Aeronautes saxatalis	white-throated swift
Trochilidae	**Hummingbirds**
Archilochus alexandri	black-chinned hummingbird
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
Picidae	**Woodpeckers**
Picoides nuttallii	Nuttall's woodpecker
Tyrannidae	**Tyrant Flycatchers**
Empidonax traillii	willow flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe

Tyrannus verticalis	western kingbird
Hirundinidae	**Swallows**
Stelgidopteryx serripennis	northern rough-winged swallow
Petrochelidon pyrrhonota	cliff swallow
Corvidae	**Jays and Crows**
Corvus corax	common raven
Aegithalidae	**Bushtits**
Psaltriparus minimus	bushtit
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Polioptilidae	**Gnatcatchers**
Polioptila californica californica	California gnatcatcher
Turdidae	**Thrushes**
Catharus guttatus	hermit thrush
Sylviidae	**Sylvid Warblers**
Chamaea fasciata	wrentit
Mimidae	**Thrashers**
Mimus polyglottos	northern mockingbird
Ptilogonatidae	**Silky Flycatchers**
Phainopepla nitens	phainopepla
Sturnidae	**Starlings**
**Sturnus vulgaris*	European starling
Vireonidae	**Vireos**
Vireo bellii pusillus	least Bell’s vireo
Vireo gilvus	warbling vireo
Parulidae	**Wood Warblers**
Oreothlypis celata	orange-crowned warbler
Oreothlypis ruficapilla	Nashville warbler
Setophaga petechia	yellow warbler
Setophaga coronata	yellow-rumped warbler
Setophaga townsendi	Townsend's warbler
Geothlypis trichas	common yellowthroat
Cardellina pusilla	Wilson's warbler
Cardinalidae	**Cardinals, Grosbeaks and Allies**

Pheucticus melanocephalus	black-headed grosbeak
Piranga ludoviciana	western tanager
Passerina caerulea	blue grosbeak
Emberizidae	**Emberizids**
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
Melospiza melodia	song sparrow
Zonotrichia leucophrys	white-crowned sparrow
Junco hyemalis	dark-eyed junco
Icteridae	**Blackbirds and Orioles**
Sturnella neglecta	western meadowlark
Icterus bullockii	Bullock's oriole
Icterus cucullatus	hooded oriole
Fringillidae	**Finches**
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
Spinus lawrencei	Lawrence's goldfinch
Spinus tristis	American goldfinch

*Indicates non-native species
§ Indicates Sensitive Species

APPENDIX C- DATA FORMS

Project name: San Jacinto river Polygon: LBV 1

Date: April 11, 2014 Survey #: 1 Surveyor: Jason Berkley

Start: 6:15 AM Weather: 54 F, no wind and clear skies

End: 7:45 AM Weather: 59 F, no wind and clear skies

Notes: Northern mockingbird, cliff swallow, Anna's hummingbird, mourning dove, song sparrow, mallard, American coot, bushtit, common yellowthroat, California towhee, Wilson's warbler,

LBV/SWWF data(lat/long, notes): Vocal male following a female around (471941/3724951)

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 1

Date: April 11, 2014 Survey #: 1 Surveyor: Jason Berkley

Start: 7:50 AM Weather: 61 F, no wind and clear skies

End: 9:00 AM Weather: 68 F, no wind and clear skies

Notes: Mourning dove, song sparrow, Anna's hummingbird, spotted towhee, Bewick's wren, western meadowlark, white-crowned sparrow, common yellowthroat, house wren, California towhee, lesser goldfinch, bushtit, house finch, yellow-rumped warbler, red-tailed hawk, Cooper's hawk, American crow

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 1

Date: April 11, 2014 Survey #: 1 Surveyor: Jason Berkley

Start: 9:45 AM Weather: 78 F, 2-3 mph winds and clear skies

End: 10:15 AM Weather: 81 F, 2-3 mph winds and clear skies

Notes: Common raven, song sparrow, lesser goldfinch, Bewick's wren, Anna's hummingbird, spotted towhee, California quail, Wilson's warbler, California towhee, coyote

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 1

Date: April 11, 2014 Survey #: 1 Surveyor: Jason Berkley

Start: 10:30 AM Weather: 82 F, no wind and clear skies

End: 11:15 AM Weather: 85 F, 1-2 mph winds and clear skies

Notes: Dark-eyed junco, white-crowned sparrow, bushtit, Bewick's wren, California towhee, black phoebe, cliff swallow, Anna's hummingbird, house finch, hooded oriole

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	San Jacinto river	Polygon:	LBV 2

Date: April 21, 2014 Survey #: 2 Surveyor:

Start: 8:00 AM Weather: 62 F, no wind and clear skies

End: 8:45 AM Weather: 66 F, no wind and clear skies

Notes: Mourning dove, cliff swallow, common raven, northern rough-winged swallow, house finch, American crow, Bewick's wren, Anna's hummingbird, yellow-rumped warbler, hooded oriole, warbling vireo, Nashville warbler, common yellowthroat, song sparrow, great egret, northern mockingbird

LBV/SWWF data(lat/long, notes): Male LBV heard calling from under the 15 freeway bridge

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 2

Date:	April 21, 2014	Survey #:	2	Surveyor:	Jason Berkley

Start:	9:00 AM	Weather:	66 F, no wind and clear skies
End:	11:00 AM	Weather:	70 F, no wind and clear skies

Notes: Common raven, house finch, American crow, Anna's hummingbird, lesser goldfinch, blue grosbeak, song sparrow, common yellowthroat, bushtit, spotted towhee, red-tailed hawk, orange-crowned warbler, western fence lizard, cottontail

LBV/SWWF data(lat/long, notes): Vocal male LBV calling and foraging in middle of site (472878/3722244)

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 2

Date: April 21, 2014 Survey #: 2 Surveyor: Jason Berkley

Start: 6:30 AM Weather: 54 F, no wind and clear skies

End: 7:00 AM Weather: 54 F, no wind and clear skies

Notes: Bushtit, Bewick's wren, California towhee, whit-crowned sparrow, black phoebe, bullocks oriole, hooded oriole, Anna's hummingbird, mourning dove, cliff swallow, Wilson's warbler

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 2

Date: April 21, 2014 Survey #: 2 Surveyor: Jason Berkley

Start: 7:15 AM Weather: 56 F, no wind and clear skies

End: 7:45 AM Weather: 58 F, no wind and clear skies

Notes: California towhee, Bewick's wren, mourning dove, Anna's hummingbird, wrentit, song sparrow, spotted towhee, California towhee

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	San Jacinto river	Polygon:	LBV 3

Date:	May 2, 2014	Survey #:	3	Surveyor:	Jason Berkley

Start:	7:30 AM	Weather:	64 F, no wind and clear skies
End:	8:30 AM	Weather:	68 F, no wind and clear skies

Notes: Cliff swallow, greater roadrunner, house finch, mourning dove, Nuttail's woodpecker, northern mockingbird, northern rough-winged swallow, Anna's hummingbird, mallard, Nashville warbler, bushtit, blue grosbeak, song sparrow, yellow warbler

LBV/SWWF data(lat/long, notes): LBV male heard calling and singing, while female seen foraging

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 3

Date:	May 2, 2014	Survey #:	3	Surveyor:	Jason Berkley

Start:	8:40 AM	Weather:	73 F, no winds and clear skies
End:	10:00 AM	Weather:	81 F, no wind and clear skies

Notes: Brewer's blackbird, mourning dove, song sparrow, California towhee, house finch, northern mockingbird, Bewick's wren, Anna's hummingbird, American kestral, lesser goldfinch, rock dove, bushtit, blue grosbeak, Wilson's warbler, red-tailed hawk, spotted towhee

LBV/SWWF data(lat/long, notes): 2 LBV's singing then getting quiet over near homeless camp calling back and forth (472002/3724994)

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 3

Date: May 2, 2014 Survey #: 3 Surveyor: Jason Berkley

Start: 6:45 AM Weather: 61 F, no wind and clear skies

End: 7:15 AM Weather: 62 F, no wind and clear skies

Notes: Song sparrow, California quail, Bewick's wren, California towhee, common raven, Anna's hummingbird, spotted towhee, lesser goldfinch

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 3

Date: May 2, 2014 Survey #: 3 Surveyor: Jason Berkley

Start: 6:00 AM Weather: 57 F, no wind and clear skies

End: 6:30 AM Weather: 58 F, no wind and clear skies

Notes: Hooded oriole, house finch, black phoebe, Bewick's wren, mourning dove, California towhee, Anna's hummingbird, northern mockingbird, Wilson's warbler, common yellowthroat, common raven, spotted towhee

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: San Jacinto river Polygon: LBV 4/SWWF 1

Date: May 15, 2014 Survey #: 4 Surveyor: Jason Berkley

Start: 7:30 AM Weather: 72 F, no wind and clear skies

End: 8:50 AM Weather: 78 F, no wind and clear skies

Notes: Common raven, cliff swallow, hooded oriole, house finch, northern rough-winged swallow, lesser goldfinch, song sparrow, Anna's hummingbird, bushtit, American goldfinch, yellow warbler, Wilson's warbler, hermit thrush, white-throated swift, house wren, willow flycatcher, least Bell's vireo

LBV/SWWF data(lat/long, notes): WIFL vocalizing and responding to tape (471997/3724996)

LBV male was calling and still hanging out near the bridge.

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 4/SWWF 1

Date: May 15, 2014 Survey #: 4 Surveyor: Jason Berkley

Start: 9:05 AM Weather: 82 F, no wind and clear skies

End: 10:30 AM Weather: 93 F, no wind and clear skies

Notes: Wilson's warbler, red-tailed hawk, lesser goldfinch, song sparrow, northern mockingbird, Townsends warbler, bushtit, warbling vireo, Anna's hummingbird, common raven, western meadowlark, yellow warbler, spotted towhee, black-headed grosbeak, western tanager, black-chinned hummingbird, Cooper's hawk, western kingbird, turkey vulture, Nuttail's woodpecker

LBV/SWWF data(lat/long, notes):

LBV 1 male vocal calling in middle of site

LBV 2 male was not very vocal, but flying around near homeless camp

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 4/SWWF 1

Date: May 15, 2014 Survey #: 4 Surveyor: Jason Berkley

Start: 6:00 AM Weather: 68 F, no wind and clear skies

End: 6:30 AM Weather: 68 F, no wind and clear skies

Notes: House finch, black phoebe, lesser goldfinch, Anna's hummingbird, Wilson's warbler, western tanager, California towhee, mourning dove, spotted towhee, Bewick's wren, Costa's hummingbird, common raven, hooded oriole,

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 4/SWWF 1

Date: May 15, 2014 Survey #: 4 Surveyor: Jason Berkley

Start: 6:45 AM Weather: 70 F, no wind and clear skies

End: 7:15 AM Weather: 70 F, no wind and clear skies

Notes: Song sparrow, mourning dove, bushtit, common raven, Anna's hummingbird, spotted towhee, California towhee, California quail, Bewick's wren,

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	San Jacinto river	Polygon:	LBV 5/SWWF 2

Date:	June 3, 2014	Survey #:	5	Surveyor:	Jason Berkley

Start:	8:10 AM	Weather:	68 F, no wind and 5% cc
End:	9:10 AM	Weather:	70 F, no wind and 5% cc

Notes: Northern rough-winged swallow, cliff swallow, Anna's hummingbird, common yellowthroat, common yellowthroat, common raven, mourning dove, song sparrow, house finch, white-throated swift, bullocks oriole, great egret, northern mockingbird, bushtit, lesser goldfinch

LBV/SWWF data(lat/long, notes): LBV male flying everywhere and calling

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 5/SWWF 2

Date: June 3, 2014 Survey #: 5 Surveyor: Jason Berkley

Start: 6:00 AM Weather: 58 F, no wind and 5% cc

End: 9:00 AM Weather: 70 F, no wind and 5% cc

Notes: European starling, Say's phoebe, house finch, mourning dove, western kingbird, Anna's hummingbird, song sparrow, spotted towhee, California towhee, northern mockingbird, house wren, blue grosbeak, yellow warbler, Nuttail's woodpecker, bushtit, lesser goldfinch, common yellowthroat, black-headed grosbeak, Costa's hummingbird

LBV/SWWF data(lat/long, notes): LBV 1 vocal male calling around the homeless encampment (472793/3722387)

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 5/SWWF 2

Date: June 2, 2014 Survey #: 5 Surveyor: Jason Berkley

Start: 9:30 AM Weather: 74 F, 1-2 mph wind and clear skies

End: 9:50 AM Weather: 74 F, 1-2 mph wind and clear skies

Notes: Phainopepla, song sparrow, Bewick's wren, house finch, Anna's hummingbird, mourning dove, California towhee, lesser goldfinch, Allen's hummingbird

LBV/SWWF data(lat/long, notes): Pair of CAGN's foraging in riparian habitat (462789/3733344)

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 5/SWWF 2

Date: June 2, 2014 Survey #: 5 Surveyor: Jason Berkley

Start: 9:55 AM Weather: 74 F, 1-2 mph wind and 5% cc

End: 10:30 AM Weather: 76 F, 1-2 mph wind and 5% cc

Notes: Cliff swallow, house finch, great egret, bushtit, yellow warbler, hooded oriole, spotted towhee, mourning dove, northern rough-winged swallow, common yellowthroat, lesser goldfinch

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: San Jacinto river Polygon: LBV 6/SWWF 3

Date: June 23, 2014 Survey #: 6 Surveyor: Jason Berkley

Start: 9:00 AM Weather: 70 F, 1-2 mph wind with clear skies

End: 9:40 AM Weather: 73 F, 1-3 mph wind with clear skies

Notes: White-throated swift, common yellowthroat, cliff swallow, red-tailed hawk, mourning dove, bushtit, Anna's hummingbird, turkey vulture, common raven, house finch, bullocks oriole

LBV/SWWF data(lat/long, notes): LBV pair and 1 juvenile seen foraging

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 6/SWWF 3

Date: June 23, 2014 Survey #: 6 Surveyor: Jason Berkley

Start: 9:45 AM Weather: 75 F, 2-4 mph wind and clear skies

End: 11:00 AM Weather: 80 F, 2-4 mph wind and clear skies

Notes: Bullocks oriole, black phoebe, northern rough-winged swallow, Anna's hummingbird, cliff swallow, song sparrow, house finch, lesser goldfinch, California towhee, bushtit, mourning dove, black-headed grosbeak, common raven, great egret, Nuttail's woodpecker, spotted towhee, blue grosbeak, red-shouldered hawk, white-throated swift, house wren, Cooper's hawk

LBV/SWWF data(lat/long, notes): LBV calling from middle of site, west of flood control channel

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 6/SWWF 3

Date: June 23, 2014 Survey #: 6 Surveyor: Jason Berkley

Start: 8:10 AM Weather: 65 F, 2-4 mph wind with clear skies

End: 8:40 AM Weather: 67 F, 2-4 mph wind with clear skies

Notes: California towhee, Anna's hummingbird, California quail, lesser goldfinch, song sparrow, Bewick's wren, house finch, phainopepla

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 6/SWWF 3

Date: June 23, 2014 Survey #: 6 Surveyor: Jason Berkley

Start: 7:00 AM Weather: 63 F, 2-4 mph wind with clear skies

End: 8:00 AM Weather: 65 F, 2-4 mph wind with clear skies

Notes: Bullocks oriole, northern rough-winged swallow, blue grosbeak, mourning dove, Anna's hummingbird, California towhee, black-headed grosbeak, red-tailed hawk, lesser goldfinch, house finch, bushtit, yellow warbler, Nuttail's woodpecker, least Bell's vireo

LBV/SWWF data(lat/long, notes): LBV vocal individual. Was first heard and seen on the northwest side of the pond, then was observed for 45 flying and calling all over the pond area. The bird was still calling in the southern portion of the pond when I left. (461715/3733025)

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: San Jacinto river Polygon: LBV 7/SWWF 4

Date: July 2, 2014 Survey #: 7 Surveyor: Jason Berkley

Start: 8:00 AM Weather: 74 F, 0-1 mph wind with clear skies

End: 8:50 AM Weather: 78 F, 0-1 mph wind with clear skies

Notes: Common raven, bushtit, common yellowthroat, cliff swallow, northern rough-winged swallow, mourning dove, song sparrow, black phoebe, house finch, Anna's hummingbird, California towhee

LBV/SWWF data(lat/long, notes): Single LBV flying around calling

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 7/SWWF 4

Date: July 2, 2014 Survey #: 7 Surveyor: Jason Berkley

Start: 9:00 AM Weather: 78 F, no wind and clear skies

End: 10:30 AM Weather: 86 F, no wind and clear skies

Notes: Black phoebe, house finch, song sparrow, Anna's hummingbird, mourning dove, common raven, red-shouldered hawk, Nuttail's woodpecker, California towhee, hooded oriole, blue grosbeak, black-chinned hummingbird, spotted towhee, western kingbird, bushtit, Bewick's wren, black-headed grosbeak

LBV/SWWF data(lat/long, notes): LBV singing in the middle of the site

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 7/SWWF 4

Date: July 2, 2014 Survey #: 7 Surveyor: Jason Berkley

Start: 5:30 AM Weather: 64 F, no wind with 100% cc

End: 7:00 AM Weather: 67 F, no wind and 20% cc

Notes: Northern rough-winged swallow, house finch, house wren, California towhee, Anna's hummingbird, yellow warbler, Bullock's oriole, Nuttail's woodpecker, black-headed grosbeak, blue grosbeak, Lawrence's goldfinch, common yellowthroat, lesser goldfinch, song sparrow, red-tailed hawk, cliff swallow, Costa's hummingbird

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 7/SWWF 4

Date: July 2, 2014 Survey #: 7 Surveyor: Jason Berkley

Start: 7:10 AM Weather: 68 F, no wind and 20% cc

End: 7:45 AM Weather: 70 F, no wind and clear skies

Notes: Mourning dove, California quail, Anna's hummingbird, California towhee, song sparrow, lesser goldfinch

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	San Jacinto river	Polygon:	LBV 8/SWWF 5

Date:	July 15, 2014	Survey #:	8	Surveyor:	Jason Berkley

Start:	8:15 AM	Weather:	75 F, 1-2 mph wind and 10% cc
End:	8:50 AM	Weather:	77 F, 1-2 mph wind and 10% cc

Notes: Cliff swallow, mourning dove, white-throated swift, house finch, common raven, lesser goldfinch, Anna's hummingbird, northern rough-winged swallow

LBV/SWWF data(lat/long, notes): LBV again only 1 individual seen calling and foraging

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name:	Elsinore	Polygon:	LBV 8/SWWF 5

Date: July 15, 2014 Survey #: 8 Surveyor: Jason Berkley

Start: 9:00 AM Weather: 77 F, no wind and 10% cc

End: 10:45 AM Weather: 91 F, 1-2 mph wind and 10% cc

Notes: House finch mourning dove, Anna's hummingbird, spotted towhee, Bewick's wren, bushtit, Nuttail's woodpecker, black-chinned hummingbird, common raven, lesser goldfinch, California towhee, song sparrow, blue grosbeak, black phoebe, red-shouldered hawk

LBV/SWWF data(lat/long, notes): LBV heard in the middle of the site, was not very vocal.

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (pond) Polygon: LBV 8/SWWF 5

Date: July 15, 2014 Survey #: 8 Surveyor: Jason Berkley

Start: 6:00 AM Weather: 68 F, no wind and clear skies

End: 7:20 AM Weather: 74 F, no wind and 10% cc

Notes: Song sparrow, house finch, Anna's hummingbird, black-headed grosbeak, Bewick's wren, mourning dove, California towhee, yellow warbler, lesser goldfinch, Bullock's oriole

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

Project name: Alberhill (seep) Polygon: LBV 8/SWWF 5

Date: July 15, 2014 Survey #: 8 Surveyor: Jason Berkley

Start: 7:30 AM Weather: 74 F, no wind and 10% cc

End: 8:00 AM Weather: 75 F, 1-2 mph wind and 10% cc

Notes: California quail, California towhee, house finch, lesser goldfinch, song sparrow, Anna's hummingbird

LBV/SWWF data(lat/long, notes):

Habitat Quality (inc. habitat, density, non-native plants etc.):

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