August 24, 2022

Connie Anderson
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VIA EMAIL
canderson@tbplanning.com

Subject: Results of a Focused Survey for Burrowing Owl for the Antelope Valley Commerce Center Project, City of Palmdale, Los Angeles County, California

Dear Ms. Anderson:

This Letter Report presents the results of focused surveys for the western burrowing owl (*Athene cunicularia hypugaea*) for the Palmdale Logistics Park Project (hereinafter referred to as "the Proposed Project") in the City of Palmdale, Los Angeles County, California (Exhibit 1). The purpose of the survey was to determine the presence or absence of the western burrowing owl during its breeding period (i.e., March 1 to August 31) on or immediately adjacent to the Project area. The habitat assessment determined that potentially suitable habitat for the western burrowing owl was present and, as a result, focused surveys were required. The surveys were completed in accordance with the California Department of Fish and Wildlife's (CDFW's) *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) by Psomas biologists who have the necessary training and experience to conduct surveys for burrowing owls.

PROJECT LOCATION AND SETTING

The Proposed Project is located on approximately 400-acres in the southern portion of the Antelope Valley in the City of Palmdale. The Project site is situated south of Columbia Way, east of Sierra Hwy and the Pacific Union railroad alignment, north of Avenue M-12, and west of 15th Street E (Exhibit 1). The Project site is located on the Lancaster East U.S. Geologic Survey 7.5-minute quadrangle map (Exhibit 2). Elevations range from approximately 2,500 feet above mean sea level (msl) in the northern portion of the site to approximately 2,555 feet above msl in the southern portion of the property. The Project site is currently undeveloped directly adjacent (northwest) to the Palmdale Regional Airport. Vegetation on the site is comprised mostly of Joshua tree woodland, with rubber rabbitbrush scrub in the north, and Mormon tea scrub in the western portion of the site. Some portions of the site have been disturbed historically (e.g., evidence of Joshua trees removal and roadway creation via off-road use). Graded dirt roads traverse the perimeter of the site and two graded dirt roads run through the southern portion of the site.

BACKGROUND

The western burrowing owl is a grassland specialist distributed throughout western North America, where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments, with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground (Poulin et al. 2020; Shaffer et al. 2022). Burrowing owls in

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Florida excavate their own burrows, but western burrowing owls depend upon the presence of burrowing mammals whose burrows are used for roosting and nesting (Poulin et al. 2020). The presence or absence of colonial fossorial mammal burrows (e.g., California ground squirrels [*Spermophilus beecheyi*]) is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drainpipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks; debris; or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators.

Burrowing owls often use "satellite", or non-nesting burrows, moving chicks into them from the nesting burrow, presumably to reduce the risk of predation (Desmond and Savidge 1998) and possibly to avoid nest parasites (Shaffer et al. 2022). One pair may use up to ten satellite burrows (James and Seabloom 1968). Individual burrowing owls have a moderate to high site fidelity to previously used burrow complexes and often use the same burrows for nesting year after year.

The western burrowing owl was once abundant and widely distributed within coastal Southern California, but it has declined precipitously in Los Angeles, Orange, San Diego, Riverside, and San Bernardino Counties. Although a petition was submitted to list the California population of the western burrowing owl as an Endangered or Threatened species, the CDFW declined to list the burrowing owl as either Threatened or Endangered in consideration of its overall population throughout the state. However, the CDFW considers the burrowing owl to be a California Species of Special Concern (CDFW 2022).

SURVEY METHODOLOGY

Focused surveys for the burrowing owl were conducted during the breeding season, which extends from March 1 to August 31. The CDFW guidelines specify time periods in which the four focused crepuscular surveys should be conducted during the breeding season: at least one survey between February 15 and April 15; three surveys between April 15 and July 15; with at least one survey after June 15. Surveys should be conducted at least three weeks apart.

During the initial reconnaissance-level wildlife survey conducted on March 10, 2022, it was determined that potentially suitable habitat for burrowing owl was present on the Project site and immediately adjacent. The burrow survey was conducted on April 11, 12, and 13, 2022, by Psomas Biologists Sarah Thomas, Allison Rudalevige, and Jack Underwood; and Consulting Biologists Sandy Leatherman, John Simon-Parent, and Miranda Scolaro. The burrow survey was conducted by walking the Project site in 10- to 20-meter (approximately 33 feet to 65 feet) belt transects (depending on shrub coverage) to achieve 100 percent visual coverage. Potentially suitable burrows were marked with Garmin Global Positioning System (GPS) units. Any natural or man-made cavities large enough to allow a burrowing owl to enter were inspected for evidence of occupation. Evidence of occupation may include prey remains, cast pellets, white-wash, feathers, and observations of owls adjacent to burrows. The burrow survey was conducted at least five days after rain, which could have washed away potential sign. Areas containing suitable habitat within 500 feet of the Project site were surveyed with binoculars.

The CDFW guidelines specify time periods in which the four focused crepuscular surveys should be conducted during the breeding season: at least one survey between February 15 and April 15; three surveys between April 15 and July 15; with at least one survey after June 15. Surveys should be conducted at least three weeks apart. Ms. Thomas, Mr. Underwood, and Psomas Biologist Trevor Bristle conducted the focused crepuscular surveys on April 14; May 18; June 7 and June 29, 2022. These surveys were conducted from either one hour before sunrise to two hours after, or from two hours before sunset to one hour after. The surveys were conducted when light conditions were sufficient to observe burrowing owl flights. All potential habitat (e.g., areas where potentially suitable burrows were located) within the

survey area was surveyed by walking in meandering transects to allow 100 percent visual coverage of the study area. The transects were spaced no more than approximately 65 feet apart in order to ensure 100 percent visual coverage of the ground surface. At the start of each transect and, at least, every 300 feet, the study area was scanned for burrowing owls or burrowing owl sign (e.g., pellets, prey remains, whitewash, or decoration) using binoculars. Periodically, binoculars were used to inspect holes; crevices; and potential perches such as rocks, fence posts, and other elevated structures for the presence of owls while listening for owl calls. All wildlife observed were recorded in field notes (Attachment B). Survey times and weather conditions are summarized in Table 1 below.

TABLE 1
SUMMARY OF BURROWING OWL SURVEYS

Survey Number	Date	Time (Start/End)	Surveyor(s)	Weather Conditions		
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)
Habitat Assessment	3/10/2022	10:00 AM–12:00 PM	Thomas	74/80	1–3/0–1	Clear/Clear
Burrow Survey	4/11/2022	8:05 AM – 3:45 PM	Thomas, Underwood, Rudalevige, Leatherman, Simon-Parent, Scolaro	52/61	3/10	0/25
Burrow Survey	4/12/2022	8:00 AM – 2:45 PM	Thomas, Underwood, Rudalevige, Leatherman, Simon-Parent, Scolaro	39/54	4–7/9	Clear/Clear
Burrow Survey	4/13/2022	7:40 AM – 1:45 PM	Thomas, Underwood, Rudalevige, Leatherman, Simon-Parent, Scolaro	41/66	4–5/3–7	Clear/Clear
Crepuscular Survey 1	4/14/2022	6:05 AM–7:15 AM	Thomas, Underwood	64/61	9/8	Clear/Clear
Crepuscular Survey 2	5/18/2022	6:35 AM–7:30 AM	Thomas, Bristle	66/73	5/6	Clear/10
Crepuscular Survey 3	6/7/2022	5:50 AM–7:30 AM	Thomas	60/76	3/3	Clear/Clear
Crepuscular Survey 4	6/29/2022	6:45 AM–8:45 AM	Thomas	68/86	0–1/0–1	30/50

°F: Fahrenheit; mph: miles per hour; %: percent

SURVEY RESULTS

No burrowing owl individuals or active/inactive burrowing owl burrows were observed during the surveys. The survey area supports low density California ground squirrel burrows. Suitable habitat and potentially suitable burrows for burrowing owl occurs mostly in the creosote bush dominated portions of the Project site. One special status species, the loggerhead shrike (*Lanius ludovicianus*), was observed in the eastern portion of the site. A California Natural Diversity Database form will be submitted to the CDFW for the observation.

Representative photographs are included in Attachment A. A complete list of all wildlife species observed during the surveys is provided in Attachment B of this report.

Psomas appreciates the opportunity to assist on this Project. If you have any comments or questions, please call Marc Blain at 626.351.2000.

Sincerely,
PSOMAS

Ann M. Johnston
Vice President, Resource Management

Marc T. Blain
Senior Project Manager

Exhibits: Exhibit 1– Project Location
Exhibit 2– U.S. Geological Survey 7.5-Minute Quadrangle
Exhibit 3– Survey Area
Exhibit 4– Survey Results
Attachment: A – Wildlife Compendium

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REFERENCES

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Aerial Source: Esri, Maxar 2021

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Project Location

Exhibit 1

Antelope Valley Commerce Center

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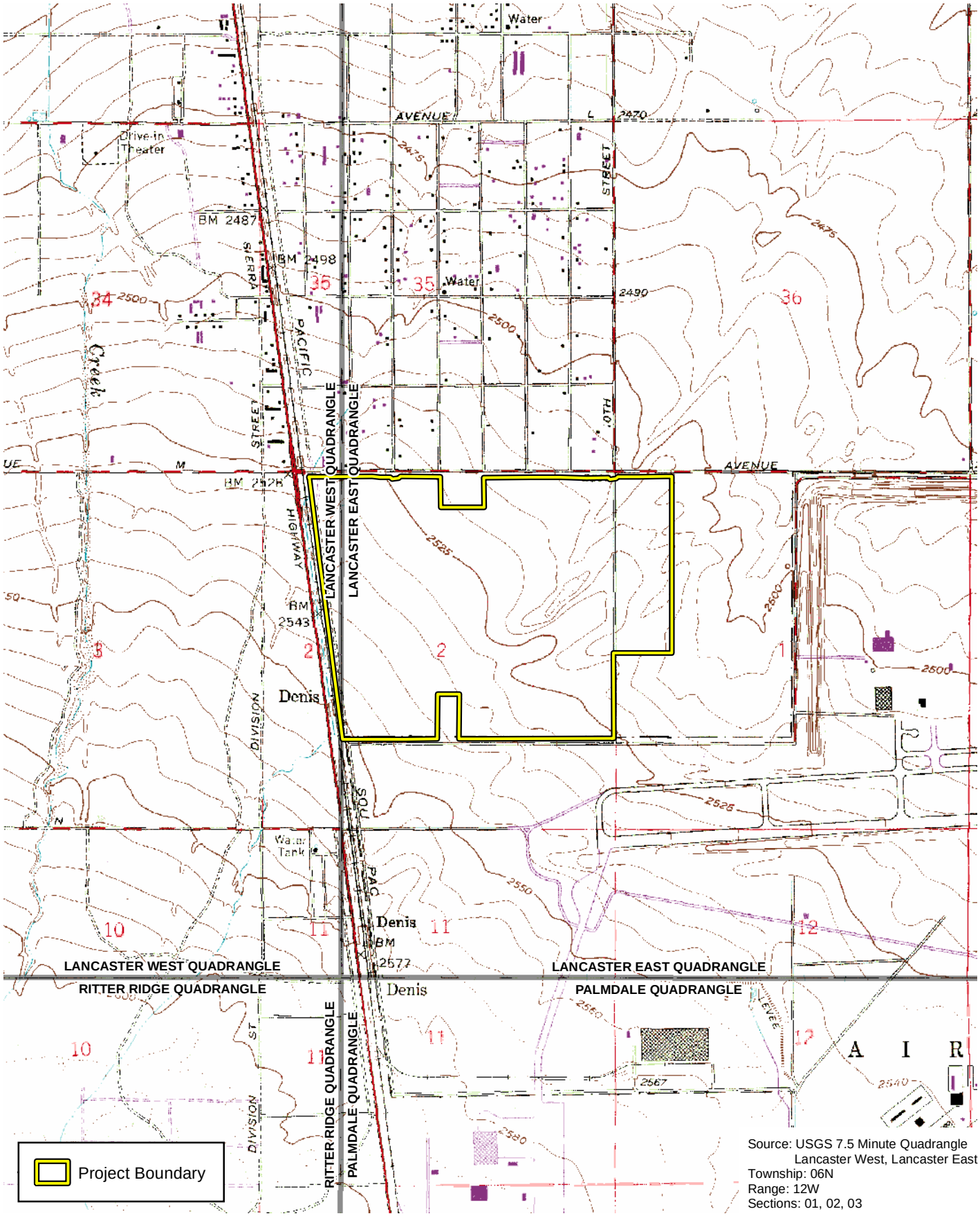

Source: USGS 7.5 Minute Quadrangle
Lancaster West, Lancaster East
Township: 06N
Range: 12W
Sections: 01, 02, 03

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USGS 7.5-Minute Digital Quadrangle

Exhibit 2

Antelope Valley Commerce Center

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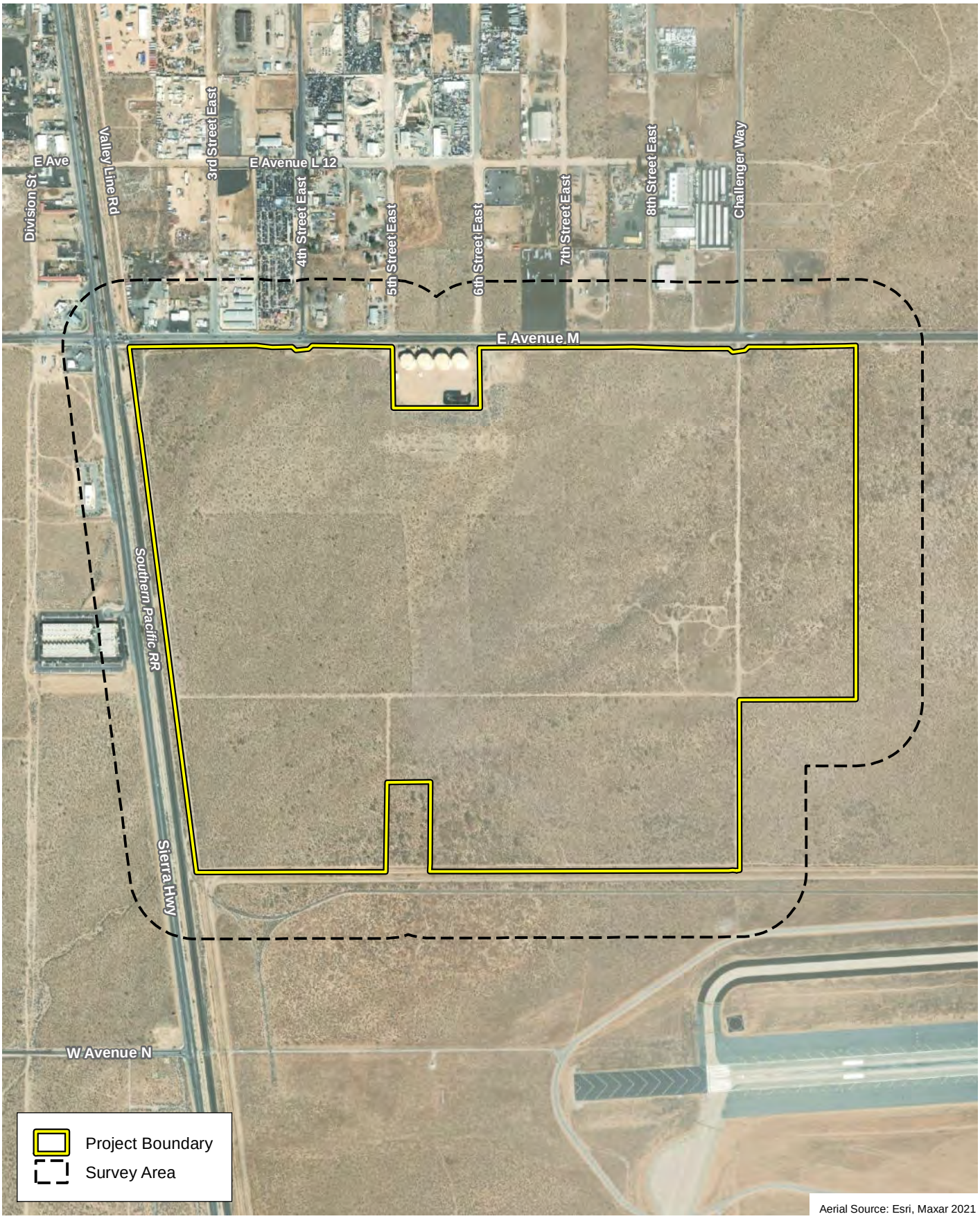

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Survey Area

Exhibit 3

Antelope Valley Commerce Center

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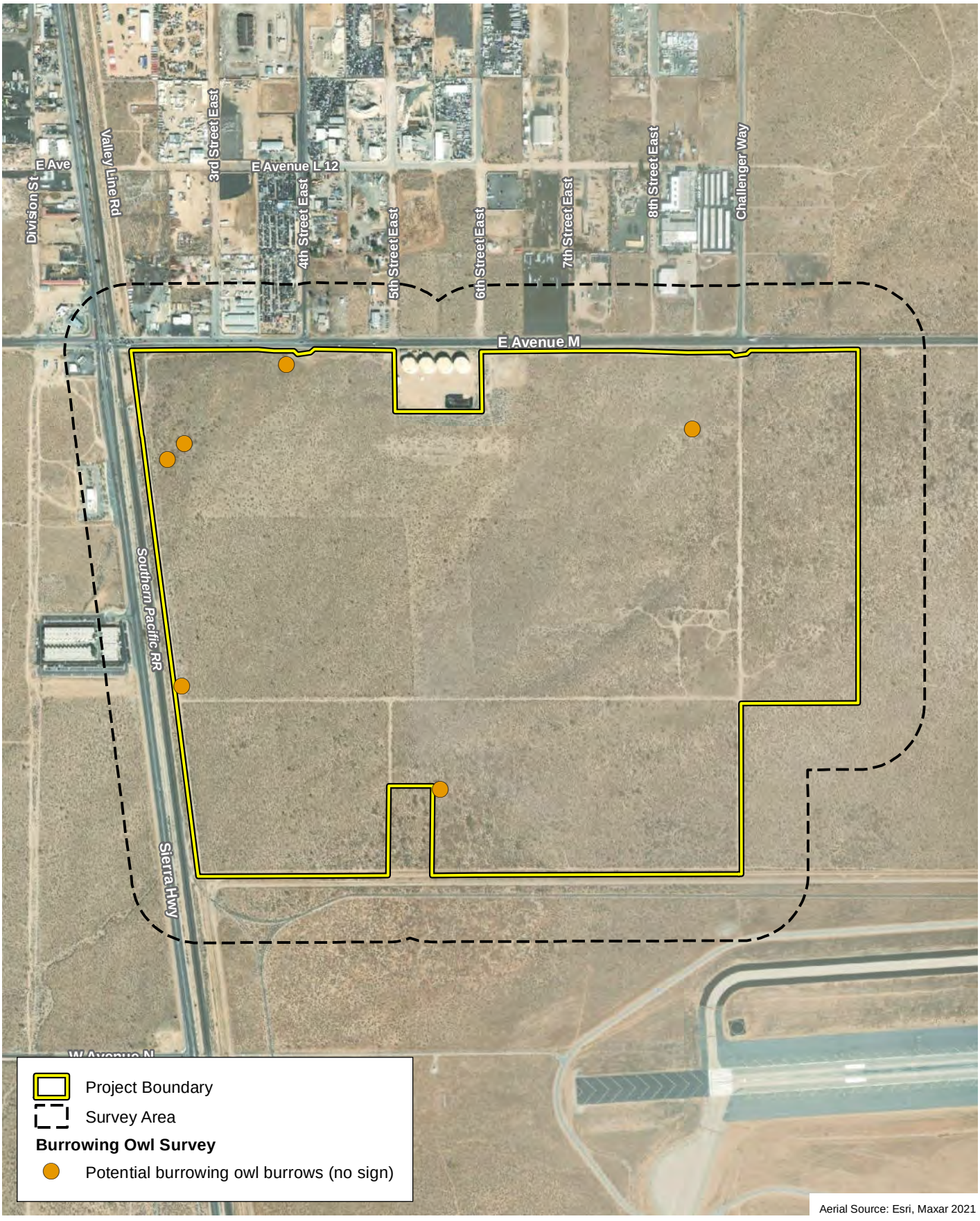

Aerial Source: Esri, Maxar 2021

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Survey Results

Exhibit 4

Antelope Valley Commerce Center

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ATTACHMENT A

WILDLIFE COMPENDIUM

WILDLIFE OBSERVED DURING SURVEYS

Species		Special Status
Scientific Name	**Common Name**	
BIRDS		
ODONTOPHORIDAE – NEW WORLD QUAIL FAMILY		
Callipepla californica	California quail	
COLUMBIDAE – PIGEON AND DOVE FAMILY		
Zenaida macroura	mourning dove	
CAPRIMULGIDAE – NIGHTJAR FAMILY		
Chordeiles minor	common nighthawk	
ACCIPITRIDAE – HAWK FAMILY		
Buteo jamaicensis	red-tailed hawk	
TYRANNIDAE – TYRANT FLYCATCHER FAMILY		
Sayornis saya	Say's phoebe	
Myiarchus cinerascens	ash-throated flycatcher	
Tyrannus vociferans	Cassin's kingbird	
LANIIDAE – SHRIKE FAMILY		
Lanius ludovicianus	loggerhead shrike	SSC
CORVIDAE – JAY AND CROW FAMILY		
Corvus corax	common raven	
TROGLODYTIDAE – WREN FAMILY		
Campylorhynchus brunneicapillus	cactus wren	
STURNIDAE – STARLING FAMILY		
*Sturnus vulgaris**	European starling*	
FRINGILLIDAE – FINCH FAMILY		
Haemorhous mexicanus	house finch	
PASSERELLIDAE – NEW WORLD SPARROW FAMILY		
Amphispiza bilineata	black-throated sparrow	
Artemisiospiza belli	Bell's sparrow	

USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife

Species Status:

State (CDFW)

SSC Species of Special Concern