MITIGATED NEGATIVE DECLARATION and INITIAL STUDY

TTM 083794, 40th Street East and Avenue R Residential Development

Prepared for:

City of Palmdale
38300 Sierra Highway
Palmdale, California 93550

Prepared by:
Mark Hagan
Wildlife Biologist
B.S. Degree, Wildlife Management
Humboldt State University

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Hazards & Hazardous Materials		Public Services
	Agriculture Resources		Hydrology/Water Quality		Recreation
	Air Quality/GHG/Energy		Land Use/Planning		Transportation/Traffic
X	Biological Resources		Mineral Resources		Utilities/Service Systems
	Cultural Resources		Noise		Mandatory Findings of Significance
	Geology/Soils		Population/Housing		

DETERMINATION: (To be completed by the Lead Agency). On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	x
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a “potentially significant impact” or potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Brenda Magaña
Planning Manager

Date

INITIAL STUDY

1. PROJECT TITLE: TTM 083794, 40th Street East and Avenue R Residential Development

2. LEAD AGENCY NAME AND ADDRESS: City of Palmdale, Planning Department, 38300 Sierra Highway, Palmdale, California 93550

3. CONTACT PERSON AND PHONE NUMBER:

   Brenda Magaña, Planning Manager, 661.267.5293

4. PROJECT LOCATION: APN 3020-041-001, Palmdale, California. The approximately 8.5 acre (3.4 ha) project area was located north of Avenue R, and west of 40th Street East, T6N, R11W, a portion of the SE1/4 of the SE1/4 of Section 29, S.B.B.M. (Figures 1 and 2).

5. PROJECT SPONSOR'S NAME AND ADDRESS:

   Fred Matian
   1718 Westwood Blvd.
   Los Angeles, CA 90024
   (310) 474-4519

6. GENERAL PLAN DESIGNATION: Single Family Residential 3

7. ZONING: SFR 3

8. DESCRIPTION OF PROJECT: Approximately 8.5 acres in the northwest corner of the intersection of 40th Street East and Avenue R will be subdivided into 30 lots with single-family residences constructed upon them and one basin lot (Figure 3). Existing roads, Adobe Drive, Mentor Court, Medea Court, and Saddleback Drive will be extended into the new residential project area (Figure 3). Modifications on adjacent roads are planned to ensure smooth traffic flow. Easements to the City of Palmdale and the Palmdale Water District will be issued for utility and infrastructure.

9. SURROUNDING LAND USES AND SETTING (Figures 4 to 6): Single family residential homes (SFR 3) are located to the north and west. Avenue R formed the southern boundary and a high school (PFS) is located south of Avenue R. The eastern boundary is formed by 40th Street. Single family residential homes (SFR 3) are located to the east of 40th Street.

10. OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED (e.g., permits, financing approval, or participation agreement). Distribution of this document is appropriate, but not limited, to the following agencies:

    Palmdale Water District
    Antelope Valley Air Quality Management District
    California Department of Fish and Wildlife
    Lahontan Regional Water Quality Control Board
    Native American Heritage Commission

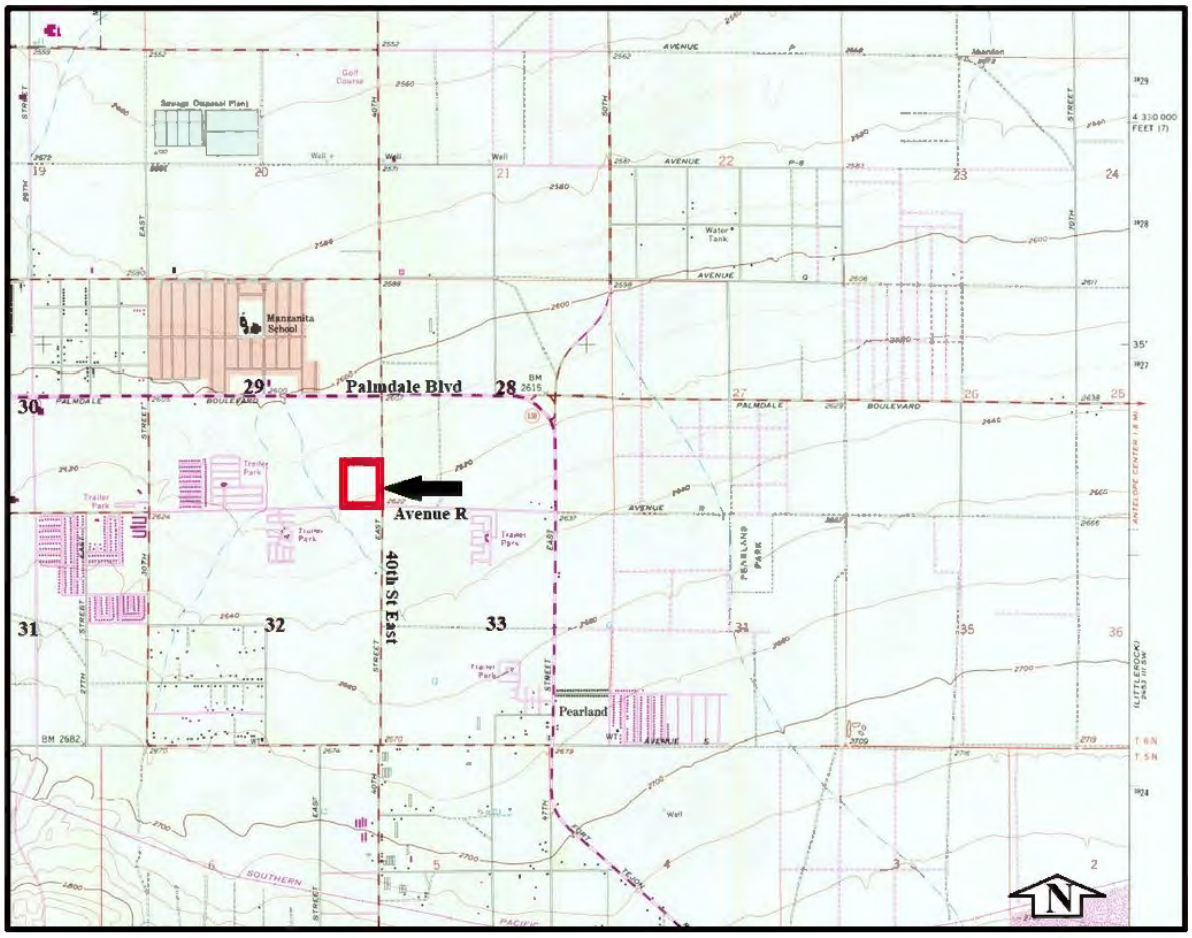
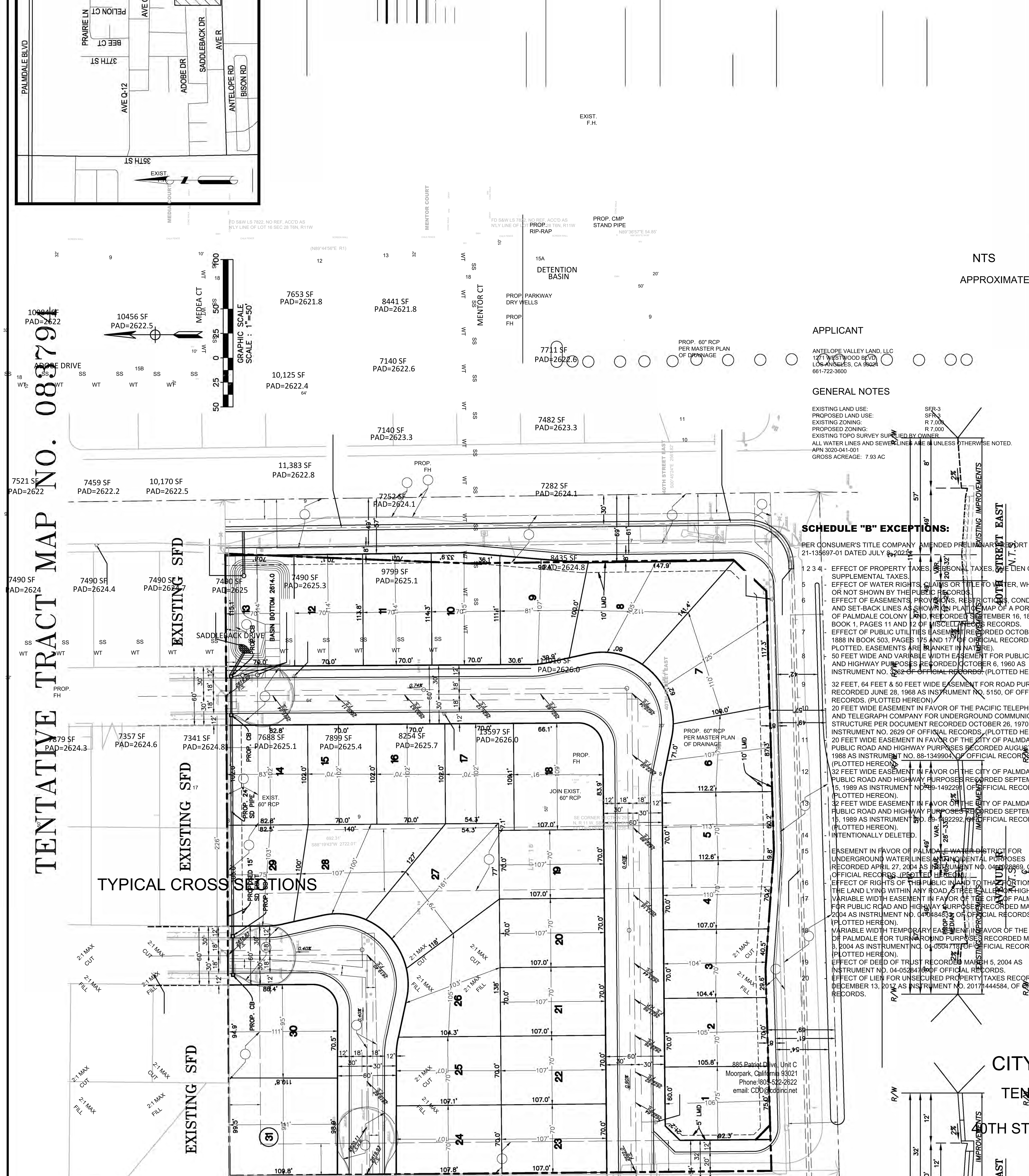


Figure 1. Approximate location of study area as depicted on excerpt from USGS Quadrangle, Palmdale, California, 7.5', 1974.

Figure 2. Approximate location of project area, Google Earth, April 2018, showing surrounding land use.



NTS

APPROXIMATE GEOGRAPHIC LOCATION: LAT: N34.57408, LON: W118.05948

CITY OF PALMDALE

VICINITY MAP

NOT TO SCALE

APPLICANT

ANTELOPE VALLEY LAND, LLC
1271 WESTWOOD BLVD.
LOS ANGELES, CA 90024
661-722-3600

GENERAL NOTES

EXISTING LAND USE:	SFR-3
PROPOSED LAND USE:	SFR-3
EXISTING ZONING:	R 7,000
PROPOSED ZONING:	R 7,000

EXISTING TOPO SURVEY SUPPLIED BY OWNER.
ALL WATER LINES AND SEWER LINES ARE 8" UNLESS OTHERWISE NOTED.
APN 3020-041-001
GROSS ACREAGE: 7.93 AC

LEGEND:

- PROPERTY/BOUNDARY LINE
- LOT LINE/PARCEL LINE
- STREET CENTER LINE
- STREET R/W LINE
- CURB & GUTTER
- EASEMENT LINE
- SS SS SEWER LINE
- WT WT WATER LINE

SCHEDULE "B" EXCEPTIONS:

PER CONSUMER'S TITLE COMPANY AMENDED PRELIMINARY REPORT NO. 21-135697-01 DATED JULY 8, 2021

1 2 3 4 - EFFECT OF PROPERTY TAXES, PERSONAL TAXES, THE LIEN OF SUPPLEMENTAL TAXES.

5 - EFFECT OF WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS.

6 - EFFECT OF EASEMENTS, PROVISIONS, RESTRICTIONS, CONDITIONS AND SET-BACK LINES AS SHOWN ON PLAT OF MAP OF A PORTION OF PALMDALE COLONY LAND, RECORDED SEPTEMBER 16, 1886 IN BOOK 1, PAGES 11 AND 12 OF MISCELLANEOUS RECORDS.

7 - EFFECT OF PUBLIC UTILITIES EASEMENT RECORDED OCTOBER 24, 1888 IN BOOK 503, PAGES 175 AND 177 OF OFFICIAL RECORDS. (NOT PLOTTED. EASEMENTS ARE BLANKET IN NATURE).

8 - 50 FEET WIDE AND VARIABLE WIDTH EASEMENT FOR PUBLIC ROAD AND HIGHWAY PURPOSES RECORDED OCTOBER 6, 1960 AS INSTRUMENT NO. 3262 OF OFFICIAL RECORDS. (PLOTTED HEREON).

9 - 32 FEET, 64 FEET & 50 FEET WIDE EASEMENT FOR ROAD PURPOSES RECORDED JUNE 28, 1968 AS INSTRUMENT NO. 5150, OF OFFICIAL RECORDS. (PLOTTED HEREON).

10 - 20 FEET WIDE EASEMENT IN FAVOR OF THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY FOR UNDERGROUND COMMUNICATION STRUCTURE PER DOCUMENT RECORDED OCTOBER 26, 1970 AS INSTRUMENT NO. 2629 OF OFFICIAL RECORDS. (PLOTTED HEREON).

11 - 20 FEET WIDE EASEMENT IN FAVOR OF THE CITY OF PALMDALE FOR PUBLIC ROAD AND HIGHWAY PURPOSES RECORDED AUGUST 25, 1988 AS INSTRUMENT NO. 88-1349904, OF OFFICIAL RECORDS. (PLOTTED HEREON).

12 - 32 FEET WIDE EASEMENT IN FAVOR OF THE CITY OF PALMDALE FOR PUBLIC ROAD AND HIGHWAY PURPOSES RECORDED SEPTEMBER 15, 1989 AS INSTRUMENT NO. 89-1492291, OF OFFICIAL RECORDS. (PLOTTED HEREON).

13 - 32 FEET WIDE EASEMENT IN FAVOR OF THE CITY OF PALMDALE FOR PUBLIC ROAD AND HIGHWAY PURPOSES RECORDED SEPTEMBER 15, 1989 AS INSTRUMENT NO. 89-1492292, OF OFFICIAL RECORDS. (PLOTTED HEREON).

14 - INTENTIONALLY DELETED.

15 - EASEMENT IN FAVOR OF PALMDALE WATER DISTRICT FOR UNDERGROUND WATER LINES AND INCIDENTAL PURPOSES RECORDED APRIL 27, 2004 AS INSTRUMENT NO. 04-1028669, OF OFFICIAL RECORDS. (PLOTTED HEREON).

16 - EFFECT OF RIGHTS OF THE PUBLIC IN AND TO THAT PORTION OF THE LAND LYING WITHIN ANY ROAD, STREET, ALLEY OR HIGHWAY.

17 - VARIABLE WIDTH EASEMENT IN FAVOR OF THE CITY OF PALMDALE FOR PUBLIC ROAD AND HIGHWAY PURPOSES RECORDED MARCH 1, 2004 AS INSTRUMENT NO. 04-0484833 OF OFFICIAL RECORDS. (PLOTTED HEREON).

18 - VARIABLE WIDTH TEMPORARY EASEMENT IN FAVOR OF THE CITY OF PALMDALE FOR TURNAROUND PURPOSES RECORDED MARCH 3, 2004 AS INSTRUMENT NO. 04-0504718, OF OFFICIAL RECORDS. (PLOTTED HEREON).

19 - EFFECT OF DEED OF TRUST RECORDED MARCH 5, 2004 AS INSTRUMENT NO. 04-0528476, OF OFFICIAL RECORDS.

20 - EFFECT OF LIEN FOR UNSECURED PROPERTY TAXES RECORDED DECEMBER 13, 2017 AS INSTRUMENT NO. 20171444584, OF OFFICIAL RECORDS.

PREPARED BY

Design Drafting

IMAD ABOUJAWDAH R.C.E. C51299

DATE

NOTES:

LEGAL DESCRIPTION:

THE SOUTHEAST QUARTER OF LOT 16 OF SECTION 29, TOWNSHIP 6 NORTH, RANGE 11 WEST, SAN BERNANDINO MERIDIAN, IN THE CITY OF PALMDALE, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP OF A PORTION OF PALMDALE COLONY LAND RECORDED IN BOOK 11 PAGES 11 AND 12 OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

TITLE REPORT:

CONSUMER'S TITLE COMPANY AMENDED PRELIMINARY REPORT NO. 21-135697-01 DATED JULY 8, 2021 AND SUPPLIED TO THIS OFFICE BY THE CLIENT.

BASIS OF BEARINGS:

THE BEARINGS SHOWN HEREON ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5, (2017.50) IN ACCORDANCE WITH THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8801-8819; SAID BEARINGS ARE BASED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING CALIFORNIA SPATIAL REFERENCE NETWORK, OR EQUIVALENT STATIONS: QHTP, LINJ, CJVG, LRRG, PBPP.

AREA:

BASED UPON MEASURED BEARINGS AND DISTANCES AS SHOWN HEREON, THE AREA IS:

345,348 SQ. FEET, 7.9281 ACRES

BENCHMARK:

VERTICAL VALUES SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) UTILIZING COUNTY OF LOS ANGELES BENCHMARKS LISTED BELOW:

BENCHMARK NO. UL6245, PALMDALE QUAD BEING DPW BM TAG IN S CB 3' E/O BCR @ SE COR PALMDALE BL & 40TH ST E, HAVING PUBLISHED ELEVATION OF 2610.297 US FEET (2010 ADJUSTMENT).

BENCHMARK NO. UL2495, PALMDALE QUAD BEING CSBM MON FL 1' E/O CF 37' N/O BCR @ NE COR PALMDALE BLVD & 35TH ST E MKD (BM 106-4 1958), HAVING PUBLISHED ELEVATION OF 2599.956 US FEET (2010 ADJUSTMENT).

TOPOGRAPHY:

TOPOGRAPHIC DATA WERE GATHERED BY THE COMBINATION OF GROUND SURVEY METHODS AND CLOSE-RANGE AERIAL PHOTOGRAPHY. TOPOGRAPHIC CONTOURS ARE SHOWN AT 1' INTERVAL.

EASEMENTS:

PLOTTABLE EASEMENTS ARE SHOWN FROM AN OWNER SUPPLIED TITLE REPORT. NON-PLOTTABLE ONES ARE NOTED ON THE SURVEY AS HAVING "EFFECT OF". BECAUSE OUR SERVICE IS LIMITED TO REPORTING ON EASEMENT LOCATIONS WE STRONGLY RECOMMEND LEGAL COUNSEL BE RETAINED TO REPORT ON TITLE PAPERS IN THEIR ENTIRETY.

885 Patriot Drive, Unit C
Moorpark, California 93021
Phone: 805-522-2622
email: CDD@cddinc.net

CITY OF PALMDALE

TENTATIVE TRACT MAP
NO 083791
40TH STREET EAST & AVENUE R

SHEET

PLOT DATE: 03-15-2024

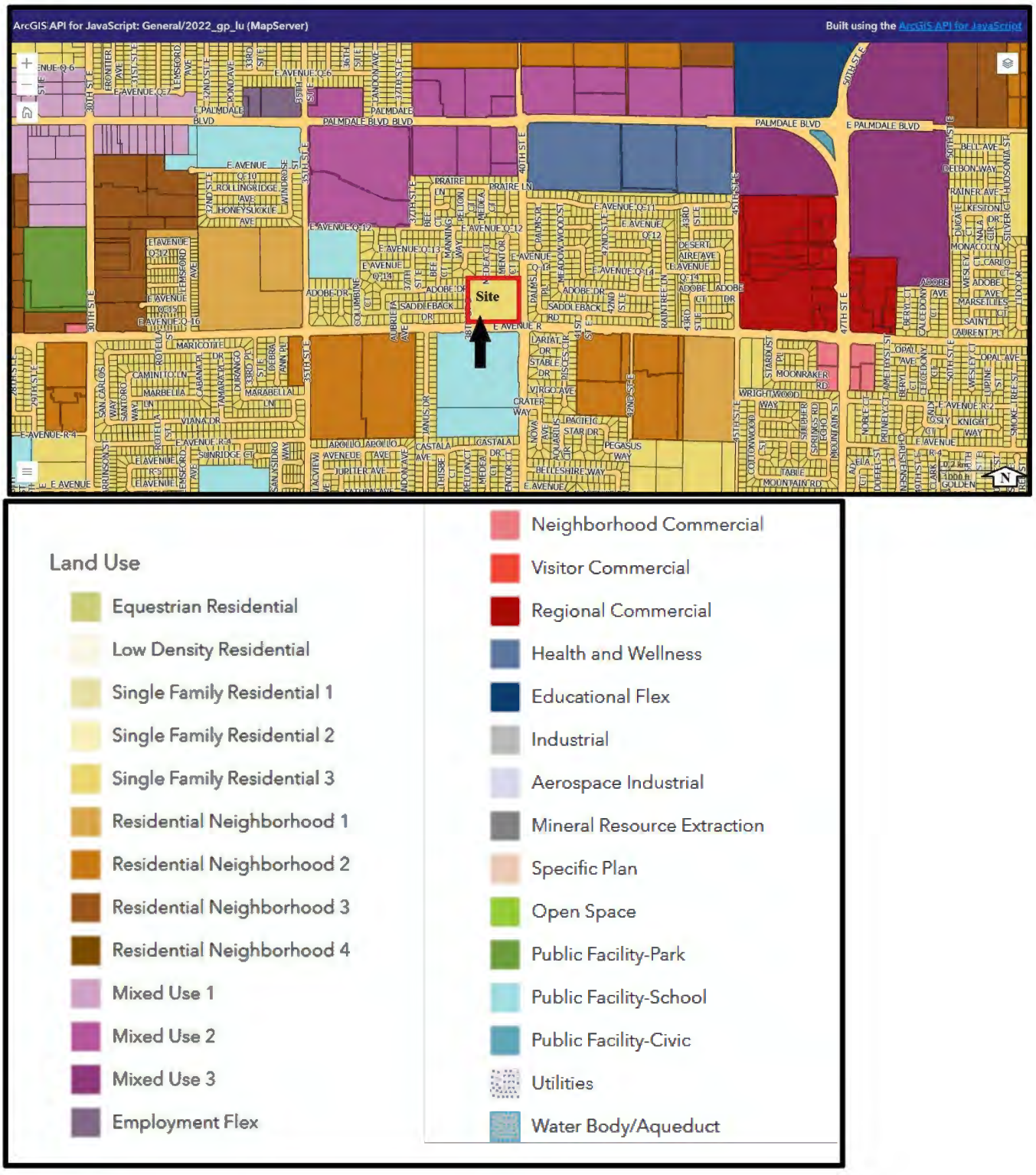


Figure 4. Excerpt from Palmdale General Plan showing surrounding land use. Note project site outline in red with black arrow.

View from project site of land use to the east.

View from project site of land use to the north.

Figure 5. Photos of surrounding land uses.

View from project site of land use to the west.

View from project site of land use to the south.

Figure 6. Photos of surrounding land uses.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1?

    The California Native American tribes interested in this area were contacted. Two tribes responded and their comments were incorporated into Cultural and Tribal Cultural Resources and the Mitigation and Monitoring Program.

1. **Aesthetics**:	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less Than Significant**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?				X
The project site is not located next to a state scenic highway and the area is not considered a scenic resource (Caltrans 2023).				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
There are no scenic trees, rock outcroppings, or historic buildings on the project site.				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
The proposed project would not substantially degrade the existing visual character or quality of the site or its surroundings. This project site is a highly disturbed field and surrounded by development. A school is present to the south and single-family homes are present to the north, east, and west. Development as planned will blend with the surrounding area and will follow Palmdale Municipal Code (PMC) requirements for aesthetically pleasing construction.				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X
This project would create a new source of light however, it would not be substantial given the existing surrounding uses. The project will design the development to follow Palmdale Municipal Code requirements.				

2. **Agriculture Resources:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less Than Significant**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
This project site is not farmland of concern noted above. No impacts would occur.				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
No. There are no Williamson Act contracts within the City of Palmdale (Rincon 2022).				
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
This site is zoned for single-family residential (SFR 3). All adjacent land is existing urban development. No impacts to farmland would occur due to development of this project site.				

3. **Air Quality:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less Than Significant**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
Development and operation of this project will comply with all applicable district rules and regulations, and proposed control measures as required by the Antelope Valley Air Quality Management District (AVAQMD). As noted specifically in the 2022 AVAQMD District Rule 403, Fugitive Dust would be incorporated into all applicable construction operations. By complying with these rules, regulations, and measures the project would not conflict with or obstruct implementation of the air quality plan. This project is located within an appropriately zoned area.				
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
As noted in the 2023 Air Quality Study "estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions are well below the applicable thresholds" (M.S. Hatch Consulting 2023). The Air Quality Study without the attachments is included in Appendix A.				
c) Expose sensitive receptors to substantial pollutant concentrations?				X
Residential development is not considered one of the project types that would expose sensitive receptors to substantial pollutant concentrations (M.S. Hatch Consulting 2023). No impacts would be expected to the school south of the project site.				
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	
Typical construction odors would be expected to be temporary in nature and not substantial. Objectionable odors of the nature expected to affect a substantial number of people would be those such as landfills, and sewage treatment facilities. This is a small residential development. No impacts would be expected.				

4. Biological Resources Would the project?	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

Results noted here are from Hagan 2023, Appendix B. This project is being developed on a highly disturbed site and is not expected to result in a significant adverse impact to biological resources (Appendix B). No sensitive wildlife sign was observed within the project site. No intact Western Joshua tree (*Yucca brevifolia*) habitat was present within the project area. However, there were 16 remnant Western Joshua trees (WJT) present within the study site. The WJT was listed as a candidate species for listing under the California Endangered Species Act in 2020. California Department of Fish and Wildlife (CDFW) has not advanced the WJT to formal listing as of this date. The State of California, however, passed the Western Joshua Tree Conservation Act (WJTCA) in June 2023 providing full protection. Either avenue, CESA or WJTCA, can be used to mitigate for the WJT. Vegetation within the project site is suitable for some types of nesting migratory birds. Swainson's hawk is a state listed threatened species. The characteristics of the Joshua trees on site are not suitable nesting habitat for Swainson's hawk. Highly developed urban environments within the Antelope Valley do not appear to be used by Swainson's hawk for nesting (eBird 2023). Swainson's hawk nests documented in the Antelope Valley appear to occur most often within large trees along or within a short distance from active agricultural fields. No Swainson's hawk nesting has been documented within 5 miles of the project site. Foraging habitat is not considered to be present within the project site due to its small size, isolated location, and low prey base. No burrowing owls (*Athene cunicularia*) or their sign were observed within the study site. California ground squirrel (*Citellus beecheyi*) burrows were present within the study site. California ground squirrel burrows may be used as cover sites by burrowing owls. However, high human activity within the study site precludes burrowing owl presence. No suitable habitat for Mohave ground squirrels was present within the study site.

BIO-1: Removal of the vegetation will occur outside the breeding season for migratory birds if possible. Nesting generally lasts from February to July but may extend beyond this time frame. If vegetation removal will occur during or close to the nesting season, a qualified biologist will survey all areas to be disturbed as close as possible but no more than one week prior to removal. If active bird nests are found impacts to nests will be avoided by either delaying work or establishing initial buffer areas of a minimum of 500 feet (152.4 m) around active raptor nests or 50 feet (15 m) around smaller migratory bird species nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

BIO-2: An Incidental Take Permit for the WJT must be processed either under CESA or the WJTCA and either mitigation banking or mitigation funds paid to protect WJTs prior to development.

The mitigation measures for Joshua trees and migratory birds have been placed in the Mitigation, Monitoring, and Reporting Program (MMRP) (Appendix C).

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?				X
There was no riparian habitat or sensitive natural community present or in proximity to the project site.				
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
There are none of these features within or in proximity to the project site.				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
There was no evidence of any movement corridors or nursery sites within this project area (Hagan 2023). This project will not interfere with the movement of fish or wildlife species, migratory corridors, or wildlife nursery sites. The site is surrounded by development and major roads.				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
The WJTs will be mitigated under CESA or the WJTCA (see item a) above). The City of Palmdale has a Joshua Tree and Native Desert Vegetation Preservation Ordinance (PMC Chapter 14.04). This ordinance was reaccomplished in 2021 after the candidacy of the WJT in a manner which no longer required relocation of WJTs on the premise the trees would be adequately protected under CDFW direction.				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
This project site is not within any approved Habitat Conservation Plan, Natural Community Conservation Plan, or any other local, regional, or state habitat conservation plan.				

5. Cultural Resources	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				X

No adverse change would be expected. A Cultural Resources Report was completed for the project site (Hudlow Cultural Resource Associates, Appendix D). There was no observation of any historical resources on the project site. The Records Search returned with a negative finding for cultural resources (Hudlow Cultural Resource Associates). However, the following mitigation measures will be employed in the event resources or remains are discovered during construction.

CUL-1: Inadvertent Discovery of Archaeological Resources. If archaeological resources are encountered during implementation of the Project, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. The Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) and the Fernandeño Tataviam Band of Mission Indians (FTBMI) shall be contacted, as detailed within TCR-1, regarding any pre-contact and/or post-contact finds and be provided information after the archaeologist makes their initial assessment of the nature of the find, to provide Tribal input with regards to significance and treatment. If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

The mitigation measure has been placed in the MMRP (Appendix C).

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				X

No archaeological resources are present within this project site (Hudlow 2022). See a) above.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?				X

No indication of human remains was observed on the project site. Mitigation measures will be employed in the event resources or remains are discovered during construction.

CUL-2: Human Remains. If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

The mitigation measure has been placed in the MMRP (Appendix C).

6. Energy	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				X
During construction and operation, this project will be required to comply with the latest Environmental Protection Agency (EPA) and California Air Resources Board (CARB) emissions standards as well as Title 24 Building Efficiency Standards. Following these standards will ensure no significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources occur.				
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficient?				X
This project will comply with applicable regulations and Palmdale General Plan policies to prevent wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation. The project will construct and operate in a manner consistent with energy efficiency goals contained in the Palmdale Energy Action Plan. Construction and operation would comply with relevant provisions of the State's CALGreen and Title 24 of the California Energy Code (Palmdale 2022, Rincon 2022).				

7. **Geology and Soils:** Would the project	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less Than Significant**	**No Impact**
a) Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving: i)rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii)Strong seismic ground shaking? iii)Seismic-related ground failure, including liquefaction? iv)Landslides?				X
i) The project site is not located within the Alquist-Priolo special studies zone and there is no evidence of any other known fault through or adjacent to the project site (GeoSoils Consultant Inc 2022). ii) Earthquake resistant design will be incorporated into the development as recommended by the consultant due to the existence of faults near the project site that could cause moderate to strong seismic shaking. Recommendations were made that (GeoSoils Consultant Inc 2022). The facilities would have to comply with the California Building Codes. iii) This site is not considered susceptible to liquefaction or dry sand settlement (GeoSoils Consultant Inc 2022). iv) Site topography is relatively flat, hazards from landslides are considered negligible (GeoSoils Consultant Inc 2022).				
b) Result in substantial soil erosion or the loss of topsoil?				X
Grading and soil disturbance will create some soil erosion and loss of topsoil but due to requirements in the Stormwater Pollution Prevention Plan (SWPP) which will be part of the construction; these actions will not result in substantial soil erosion or loss of topsoil. Recommendations provided within the geotechnical study would be incorporated within the construction.				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
The project would comply with the California Building Code and incorporate recommendations from the geo-technical and soils report into the development of the project.				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
The expansion index tests (ASTM D 4829) indicate that the surficial soils are within the “very low” expansion category (GeoSoils Consultant Inc 2022). Therefore no substantial risks to life or property would be expected.				

7.Geology and Soils: Would the project	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
No septic tanks or alternate wastewater disposal systems will be used.				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
The project site is on a previously developed site which has been graded and recontoured, no paleontological resources or unique geologic features are present or expected. However, mitigation measures will be employed in the event resources are discovered during construction. GEO-1: Inadvertent Discovery of Paleontological Resources. If paleontological resources are encountered during implementation of the Project, ground-disturbing activities will be temporarily redirected from the vicinity of the find. A qualified paleontologist (the "Project Paleontologist") shall be retained by the developer to make an evaluation of the find. If the resource is significant, Mitigation Measure GEO-2 shall apply. GEO-2: Paleontological Treatment Plan. If a significant paleontological resource(s) is discovered on the property, in consultation with the Project proponent and the City, the qualified paleontologist shall develop a plan of mitigation which shall include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find. These measures are placed in the MMRP (Appendix C).				

8. Greenhouse Gas Emissions: Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
According to the 2023 Air Quality Study "the estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions are well below the applicable AVAQMD Significant Emissions Thresholds; therefore, this project does not have a significant air quality impact on the environment" (M.S. Hatch Consulting 2023). The 2023 study without attachments has been included in Appendix A for review. The full study can be obtained as noted in the Literature Cited.				
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
Given that greenhouse gases would be well below the applicable AVAQMD Significant Emissions Thresholds no conflict with applicable plan, policy, or regulation would occur. The project incorporates energy-efficiency and green building standards as detailed within the California Building Standards Code and required in the Palmdale General Plan.				

9. Hazards and Hazardous Materials	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
Other than common hazardous materials used during construction and normal household use (such as cleaners, petroleum-based fuels, oils, etc.) no large amount of hazardous materials usage would be anticipated.				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
Note a) above.				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
Note a) above.				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
An Envirostor search was completed for the project site on 2 June 2023. No hazardous material sites were within 1 mile of the project site.				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
This project site is not located within an airport land use plan and is not within 2 miles of an airport. The nearest airport (Palmdale Regional) is 3 miles away from project site.				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
This project is not located within the vicinity of a private airstrip.				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
Development of this project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. This project is in an appropriately zoned area where these issues were previously considered when zoned.				

9.Hazards and Hazardous Materials	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

The project will not expose people of structures to significant risk of loss, injury or death due to wildland fires. Little to no wildlands are left within this area of Palmdale. The project is surrounded by development.

10. Hydrology and Water Quality	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements?			X	
The project will apply National Pollutant Discharge Elimination System (NPDES) best management practices to ensure water quality standards and waste discharge requirements are met. The required Stormwater Pollution Prevention Plan (SWPPP) is intended to ensure no violations occur. These requirements are already incorporated into construction designs.				
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
Development of 31 homes will not require a substantial amount of groundwater in the overall context of the City. This site was assessed and zoned for residential housing within the General Plan. This project is not expected to deplete groundwater supplies, interfere with groundwater recharge or lower the local groundwater table. The development will be served by the Palmdale Water Department. Title 24 Building Code requirements and City Ordinances, to include the Water Efficient Landscape Ordinance will be incorporated into the development to lower water usage of the residents.				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in: i)substantial erosion or siltation on- or off-site? ii)substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site? iii)create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? iv)impede or redirect flood flows?				X
Best management practices as required by both NPDES will control erosion and siltation during construction. Sufficient drainage control through a catch basin will be incorporated into the project development as shown in the site plan (Figure 3).				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
This site is not located within any of these hazard zones.				

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

The proposed project is being developed within an already evaluated area zoned for residential development. This development is small, normal construction, and normal operations fitting within the bounds expected within the General Plan for build out (City of Palmdale 2022).

11. Land Use and Planning	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Physically divide an established community?				X
This is an isolated site within a developed area, no community would be divided.				
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
No conflict with any applicable plan or regulation would occur. The project site is zoned appropriately for the planned project.				
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
There are no habitat conservation or natural community conservation plans that cover this area.				

12. Mineral Resources	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a)Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
This project site is in an area that has already been developed and is located within an already established area with major roads and facilities surrounding it. No loss of known mineral resources would occur due to development of this site.				
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
See a) above.				

13. Noise	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
Construction of the site would be required to follow established standards within the General Plan (Palmdale 2022, Rincon 2022). This area is within an industrial area where noise sensitive receptors are not present. Construction noise would be considered normal conventional standard for this type of development.				
b) Generation of excessive groundborne vibration or groundborne noise levels?				X
Normal conventional construction noise would be expected during development of this project. Operations would be consistent with that expected in a normal residential living environment.				
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
The project site is not within the vicinity of any airports. The nearest airport (Palmdale Regional) is 3 miles away from project site.				

14. Population and Housing	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
New homes are being proposed and would be expected to increase population growth. However, this is in an area already planned for this use and evaluated in the General Plan.				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
No housing would be displaced due to development of this project site. There is no development on the project site.				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
People would not be displaced due to development of this project site. There are no people living within the project site.				

15. Public Services:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				X
Fire Protection				X
Police Protection				X
Schools, parks, other public facilities				X
The project is compatible with the City's land designation. Impacts on public services were evaluated for this use within the General Plan (Rincon 2022, Palmdale 2022).				

16. Recreation	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
This is a relatively small residential area consisting of 8.5 acres and 30 homes. This small addition in housing would not be expected to have a significant impact on parks or other recreational facility.				
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
No recreational facilities nor need for recreational facilities will occur due to development of this project site.				

17. **Transportation** Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less Than Significant**	**No Impact**
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
This project will not conflict with the accepted circulation system addressed in the Palmdale General Plan.				
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				X
The VMT Analysis note that based on the SCAG regional travel demand model and the thresholds outlined in the City's guidelines, the Project VMT is determined to be 17.49 miles per Capita for the 2012 Base Year (Linscott Law & Greenspan Engineers 2022). The Project is therefore determined to have a less than significant VMT impact (Linscott Law & Greenspan Engineers 2022). Based on the project related VMT analysis and conclusions reported in the VMT analysis report, cumulative household VMT impacts are also not anticipated for the Project (Linscott Law & Greenspan Engineers 2022).				
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
No sharp curves or intersections are planned during construction of this project (Figure 3).				
d) Result in inadequate emergency access?				X
Roads bordering the project site are sufficient to provide emergency access for this planned use. The project is within an already evaluated land designation for residential use which has considered emergency access. Modifications on adjacent roads are planned to ensure smooth traffic flow which will also further assist in ensuring the project does not result in inadequate emergency access.				

18. Tribal Cultural Resources: Would the project cause a substantial adverse change in the significance of a Tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less Than Significant**	**No Impact**
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)				X
There are no resources present on this site listed in the California Register of Historical Resources or in a local register.				
b) A resource determined by the lead agency, in its discretion and is supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.				X

See a) above, it is not expected that any significant resources are present. However, the following mitigation measures will be followed.

TRIB-1. The YSMN and FTBMI shall be contacted, as detailed in CR-1, of any pre-contact and/or post-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with FTBMI and YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN and FTBMI for the remainder of the project, should they elect to place a monitor on-site.

TRIB-2. All archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to FTBMI and YSMN. The Lead Agency and/or applicant shall, in good faith, consult with them throughout the life of the project.

TRIB-3. Inadvertent discoveries of human remains and/or funerary object(s) are subject to California State Health and Safety Code Section 7050.5, and the subsequent disposition of those discoveries shall be decided by the Most Likely Descendant (MLD), as determined by the Native American Heritage Commission (NAHC), should those findings be determined as Native American in origin.

The mitigation measures have been placed in the MMRP (Appendix C).

19. Utilities and Service Systems	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Require or result in the relocation or construction or new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				X
Connections to existing utility infrastructure will be made during construction of the residential housing. This is the only new or expanded infrastructure planned.				
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
This residential housing was already considered during planning and zoning efforts evaluated in the General Plan.				
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
See b) above.				
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impact the attainment of solid waste reduction goals?				X
Sufficient landfill space is available for a project this size. This project is not anticipated to impact attainment of solid waste reduction goals. Recycling protocols are part of normal waste management efforts within the City.				
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X
During construction the project will comply with all federal, state, local management and reduction statutes/regulations for solid waste. All residents will be serviced by Waste Management who provides the appropriate containers and educational information for management and reduction of solid waste.				

20. Mandatory Findings of Significances	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
There are no valuable habitats or wildlife within this project site and no examples of California history or prehistory. The Joshua trees within the site are isolated from any Joshua tree woodland/habitat and provide minimal value to wildlife. Loss of these trees to the native community has already occurred and although the remaining trees do have a level of value no significant impacts are anticipated.				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				X
No cumulatively considerable impacts are expected from this project. The project has a small footprint, is within an already zoned and developed residential area which had been planned and evaluated within the General Plan (Palmdale 2022, Rincon 2022).				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X
As noted in the individual elements of this checklist there are no significant impacts within any of the categories. There is nothing unusual or large about this project. This is a conventional straightforward project that will not cause substantial adverse effects on human beings directly or indirectly.				

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Appendix A Air Quality Study without Attachments

Date: April 18, 2023
To: Mr. Fred Matian
From: M. S. Hatch Consulting, LLC
Subject: Air Quality Study – 40th Street East & Avenue R Housing Development, TTM 83794, Palmdale, CA

M. S. Hatch Consulting, LLC (MSHC) appreciates the opportunity to prepare the air quality study for the proposed construction and operation of the 40th Street East & Avenue R Housing Development. This project consists of 31 single family homes on approximately 7.93 acres of land in the City of Palmdale. This air quality study includes the estimated criteria pollutant and greenhouse gas emissions from the construction and operation of the proposed project.

Executive Summary

Table 1 and Table 2 compare the estimated annual and daily emissions summaries from the construction and operation of the proposed housing development to the significant emission thresholds described in the Antelope Valley Air Quality Management District (AVAQMD) California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, dated August 2016, included in Attachment A. The estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions **are well below the applicable thresholds**. Greenhouse gas emissions are presented in units of carbon dioxide equivalent (CO_2e). The proposed project is not considered one of the project types that the AVAQMD CEQA Guidelines require to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations.[1] As such, hazardous air pollutants (HAP) emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors.

Table 1. Annual Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (tons per year)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2e (MT/year)
Year 1 Construction Emissions (2024)	0.15	1.81	1.34	< 0.01	0.42	0.22	388
Year 2 Construction Emissions (2025)	0.19	1.65	2.26	< 0.01	0.13	0.08	375
Year 3 Construction Emissions (2026)	0.31	0.89	1.19	< 0.01	0.07	0.04	201
Total Operational Emissions	0.40	0.25	1.65	< 0.01	0.32	0.09	405
Significant Emissions Threshold	**25**	**25**	**100**	**25**	**15**	**12**	**100,000**

[1] Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion): any industrial project within 1000 feet; a distribution center (40 or more trucks per day) within 1000 feet; a major transportation project (50,000 or more vehicles per day) within 1000 feet; a dry cleaner using perchloroethylene within 500 feet; or a gasoline dispensing facility within 300 feet.

Table 2. Daily Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2e (MT/year)
Year 1 Construction Emissions (2024)	2.72	27.23	18.93	0.08	9.04	5.11	8,417
Year 2 Construction Emissions (2025)	1.55	13.28	17.91	0.03	1.08	0.65	3,338
Year 3 Construction Emissions (2026)	10.81	14.43	19.89	0.04	1.22	0.72	3,673
Total Operational Emissions	2.48	1.74	11.23	0.02	1.86	0.56	2,683
Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**	**548,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_x: oxides of nitrogen; CO: Carbon monoxide; SO_x: Oxides of sulfur; $PM_{2.5}$: particulate matter less than 2.5 micrometers in diameter; PM_{10}: particulate matter less than 10 micrometers in diameter; CO_2e: Carbon dioxide equivalent; MT: metric ton

Project Description

The proposed project includes the construction of 31 single family homes on 7.93 acres of land. The project site is a vacant lot located at 40th Street East and Avenue R in Palmdale, CA (APN 3020-041-001). The site location is included in Figure 1 and the proposed site plan is included in Figure 2.

Figure 1. Regional Vicinity

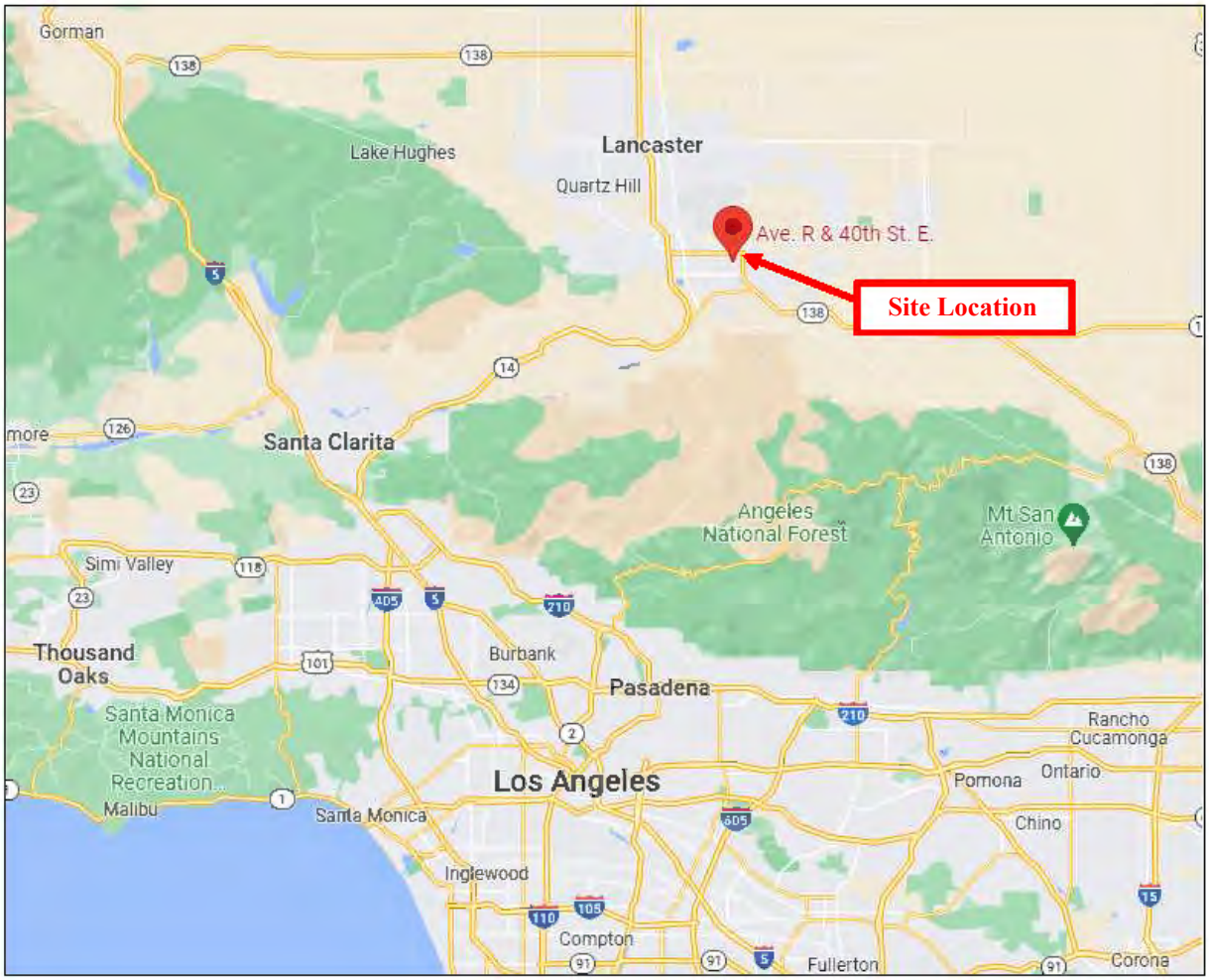
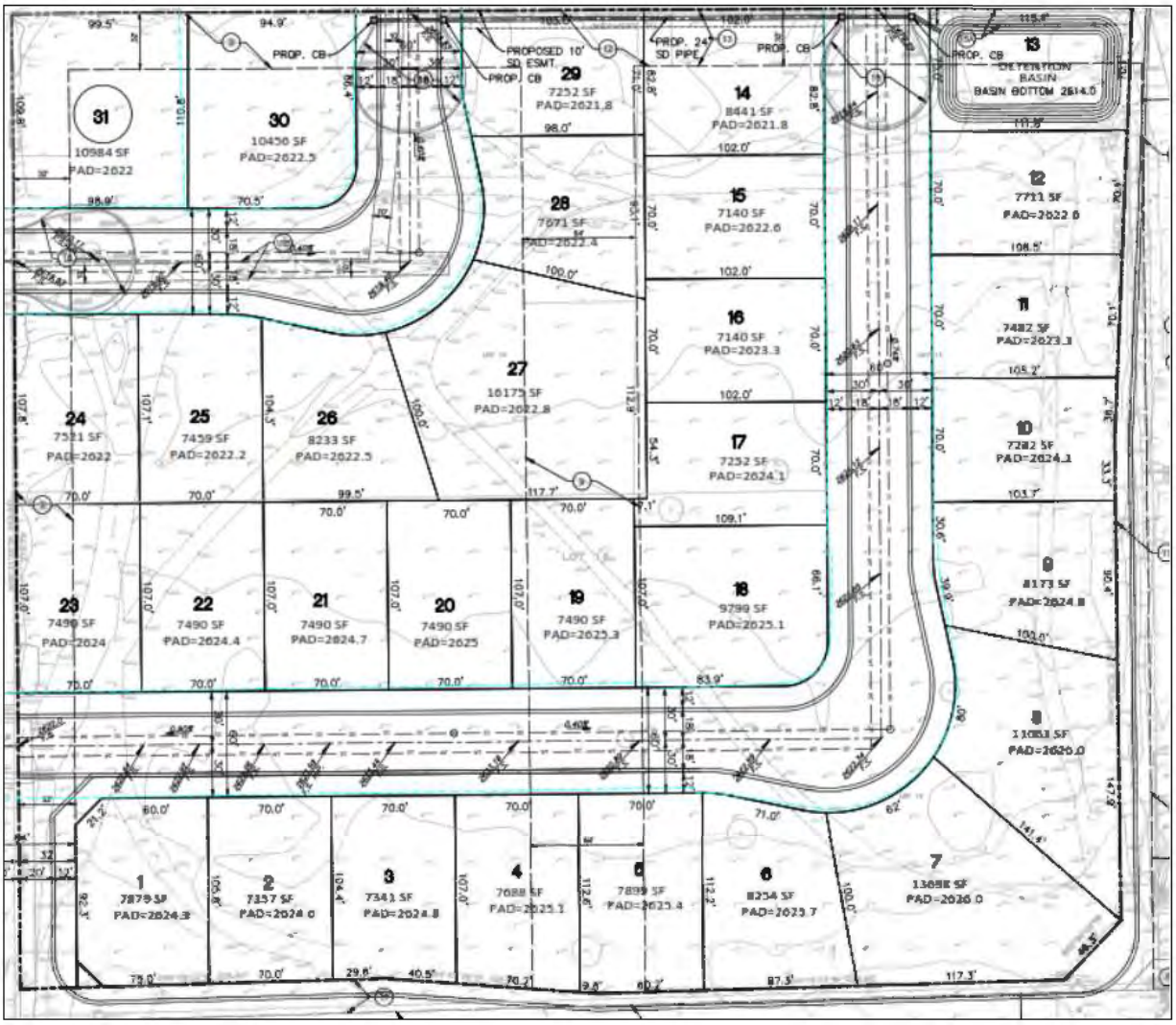


Figure 2. Site Plan – Housing Development - Palmdale, CA



Sources of Emissions

The emissions associated with the proposed project consist of construction and operational emissions from the housing development. Construction emissions are temporary and include emissions of criteria pollutants and greenhouse gases from construction activities during site preparation, grading, paving, building construction, and the application of architectural coatings. Operational emissions consist of area sources (i.e., re-applying architectural coatings, consumer products, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), solid waste disposal, and water and wastewater use (i.e., supplying and treating water and wastewater).

Emissions Estimates

Table 3 and 4 present the annual and daily emissions summaries from the construction and operation of the proposed project, respectively. Emissions were estimated using CalEEMod Version 2020.4.0. The detailed emissions model outputs are included in Attachment B.

This project is not considered one of the project types that the AVAQMD CEQA Guidelines require to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations. As such, HAP emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors.

Table 3. Annual Construction and Operational Emissions Summary

Emissions Source	Total Emissions (tons per year)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2e (MT/year)
Construction Emissions							
Year 1 Construction Emissions (2024)	0.15	1.81	1.34	< 0.01	0.42	0.22	388
Year 2 Construction Emissions (2025)	0.19	1.65	2.26	< 0.01	0.13	0.08	375
Year 3 Construction Emissions (2026)	0.31	0.89	1.19	< 0.01	0.07	0.04	201
Operational Emissions							
Area Sources	0.25	0.02	0.24	< 0.01	< 0.01	< 0.01	25
Energy	< 0.01	0.04	0.02	< 0.01	< 0.01	< 0.01	86
Mobile	0.15	0.19	1.40	< 0.01	0.31	0.09	266
Waste	N/A	N/A	N/A	N/A	0.00	0.00	18
Water	N/A	N/A	N/A	N/A	0.00	0.00	10
Total Operational Emissions	**0.40**	**0.25**	**1.65**	**< 0.01**	**0.32**	**0.09**	**405**
Significant Emissions Threshold	**25**	**25**	**100**	**25**	**15**	**12**	**100,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_x: oxides of nitrogen; CO: Carbon monoxide; SO_x: Oxides of sulfur; $PM_{2.5}$: particulate matter less than 2.5 micrometers in diameter; PM_{10}: particulate matter less than 10 micrometers in diameter; CO_2e: Carbon dioxide equivalent; MT: metric ton

Table 4. Daily Construction and Operational Emissions Summary

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2e (MT/year)
Construction Emissions							
Year 1 Construction Emissions (2024)	2.72	27.23	18.93	0.08	9.04	5.11	8,417
Year 2 Construction Emissions (2025)	1.55	13.28	17.91	0.03	1.08	0.65	3,338
Year 3 Construction Emissions (2026)	10.81	14.43	19.89	0.04	1.22	0.72	3,673
Operational Emissions							
Area Sources	1.47	0.54	2.77	< 0.01	0.06	0.06	665
Energy	0.02	0.20	0.08	< 0.01	0.02	0.02	256
Mobile	0.98	1.00	8.37	0.02	1.79	0.49	1,761
Waste	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Water	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Operational Emissions	**2.48**	**1.74**	**11.23**	**0.02**	**1.86**	**0.56**	**2,683**
Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**	**548,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_X: oxides of nitrogen; CO: Carbon monoxide; SO_X: Oxides of sulfur; $PM_{2.5}$: particulate matter less than 2.5 micrometers in diameter; PM_{10}: particulate matter less than 10 micrometers in diameter; CO_2e: Carbon dioxide equivalent; MT: metric ton

Emissions Calculation Methodology

Construction and operational emissions were based on four CalEEMod land use types*: Single Family Housing, City Park, Other Asphalt Surfaces,* and *Other Non-Asphalt Surfaces*. A discussion on the land use types that were used for the emissions modeling is included below.

CalEEMod Land Use Type: Single Family Housing

The *Single Family Housing* land use type was used to model the emissions associated with the proposed housing development. The total residential acreage (5.76 acres) was provided by Civil Design and Drafting, Inc. (Civil Design). The CalEEMod default value was used for the total building square footage.

CalEEMod Land Use Type: City Park

The City Park land use type was used to model the emissions associated with any open space (e.g., natural detention basins, landscaped areas, etc.) within the proposed housing development. The total acreage (0.18 acres) was provided by Civil Design.

CalEEMod Land Use Type: Other Asphalt Surfaces

The Other Asphalt Surfaces land use type was used to model the emissions associated with residential streets within the housing development. The acreage (1.07 acres) was provided by Civil Design.

CalEEMod Land Use Type: Other Non-Asphalt Surfaces

The *Other Non-Asphalt Surfaces* land use type was used to model the emissions associated with sidewalks within the housing development. The acreage (0.92 acres) was provided by Civil Design.

Construction Emissions

Construction emissions were calculated using CalEEMod defaults and input provided by Civil Design. Civil Design reviewed and verified the list of construction equipment and anticipated construction schedule.

Table 5 provides the anticipated construction schedule. Civil Design provided the proposed start date (6/1/2024) and end date (7/1/2026) for the project and indicated that work would be conducted five days per week. The schedule was adjusted to have the *Paving* phase conducted prior to the *Building Construction* phase. In addition, it was assumed that the *Architectural Coating* phase would overlap with end of the *Building Construction* phase. The durations of each construction phase were increased from the CalEEMod default values to match the estimated project timeline.

Table 6 provides the anticipated number of equipment that will be used during each construction phase, the hours per day the equipment will be operated, and the horsepower of the equipment. The values in Table 6 are all CalEEMod default values.

Based on input from Civil Design, this project will require 25,000 cubic yards of material import and 25,000 cubic yards of material export during the *Grading* phase; as such, the emissions for material haul trips were included in the construction emissions. For fugitive dust emissions, CalEEMod defaults do not include any control of fugitive dust from project construction sites. AVAQMD Rule 403 requires that fugitive dust from any "active operation, open

storage pile, or disturbed surface area" be controlled so that the no presence of dust remains visible beyond the property line. To meet this requirement, the standard operation is watering active sites three times per day. Although the addition of watering for dust control is listed as a mitigation measure in CalEEMod, within the AVAQMD this is a requirement, and is therefore included.

For architectural coating operations, VOC emissions were calculated based on the assumption that the coatings would be compliant with the VOC content limits of AVAQMD Rule 1113.[2]

Table 5. Construction Schedule

Construction Phase	Start Date	End Date	Days/week	Total Days
Demolition	N/A	N/A	N/A	N/A
Site Preparation	6/1/2024	8/9/2024	5	50
Grading	8/10/2024	11/15/2024	5	70
Paving	11/16/2024	2/21/2025	5	70
Building Construction	2/22/2025	7/1/2026	5	353
Architectural Coating	4/30/2026	7/1/2026	5	45

Table 6. Construction Equipment

Construction Phase	Equipment	Number of Equipment	Hours per day	Horsepower
Site Preparation	Rubber Tired Dozers	3	8	247
Site Preparation	Tractors/Loaders/Backhoes	4	8	97
Grading	Excavators	1	8	158
Grading	Graders	1	8	187
Grading	Rubber Tired Dozers	1	8	247
Grading	Tractors/Loaders/Backhoes	3	8	97
Paving	Pavers	2	8	130
Paving	Paving Equipment	2	8	132
Paving	Rollers	2	8	80
Building Construction	Cranes	1	7	231
Building Construction	Forklifts	3	8	89
Building Construction	Generator Sets	1	8	84
Building Construction	Tractors/Loaders/Backhoes	3	7	97
Building Construction	Welders	1	8	46
Architectural Coating	Air Compressors	1	6	78

Operational Emissions

Operational emissions consist of area sources (i.e., re-applying architectural coatings, consumer products, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), solid waste disposal, and water and wastewater use (i.e., supplying and treating water and wastewater).

[2] For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For the parking lot coatings, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on AVAQMD Rule 1113.

For area-source emissions, it was determined that woodstoves would not be installed, and a gas fireplace would be installed in each home. For architectural coating operations (i.e., re-applying coatings), VOC emissions were calculated based on the assumption that the coatings would be compliant with the VOC content limits of AVAQMD Rule 1113.[3] All other operational emissions sources were calculated using CalEEMod default factors.

Findings

The estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions **are well below the applicable AVAQMD Significant Emissions Thresholds**; therefore, this project does not have a significant air quality impact on the environment. In addition, this project is not expected to expose sensitive receptors to substantial pollutant concentrations. Since the construction and operational emissions are below the significance thresholds, emissions mitigation measures are not required.

[3] For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For the parking lot coatings, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on AVAQMD Rule 1113.

Appendix B Biological Resources Report

Biological Resource Assessment of
APN 3020-041-001
Palmdale, California

May 26, 2023

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Biological Resource Assessment of APN 3020-041-001, Palmdale, California

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Abstract

Development has been proposed for APN 3020-041-001, Palmdale, California. The approximately 8.5 acre (3.4 ha) study area was located north of Avenue R, and west of 40th Street East, T6N, R11W, a portion of the SE1/4 of the SE1/4 of Section 29, S.B.B.M. A line transect survey was conducted on 5 May 2023 to inventory biological resources. The proposed project area was characteristic of a highly impacted lot. A total of 30 plant species and 14 wildlife species or their sign were observed during the line transect survey. No desert tortoises (*Gopherus agassizii*) or their sign were observed within the study site. No Mohave ground squirrels (*Xerospermophilus mohavensis*) were observed or audibly detected. No burrowing owls (*Athene cunicularia*) or their sign were observed within the study site. California ground squirrel (*Citellus beecheyi*) burrows were present within the study site. California ground squirrel burrows may be used as cover sites by burrowing owls. However, high human activity within the study site precludes burrowing owl presence. No desert kit foxes (*Vulpes macrotis*) or their sign were observed within the study site. No suitable forage or nesting opportunity was present within the study area for Swainson's hawks (*Buteo swainsoni*). No Swainson's hawk nests have been documented within 5 miles of the study site. Sixteen Joshua trees (*Yucca brevifolia*) were present within the study site. Joshua tree preservation measures/regulations are in flux at this time. Although currently considered a candidate species under the California Endangered Species Act this is expected to be changed to protection under The Joshua Tree Act within the next few months or dropped from listing consideration. No desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflowers (*Eriophyllum mohanense*), or alkali mariposa lilies (*Calochortus striatus*) or their habitat were observed within the study site. No other state or federal listed species are expected to occur within the study area. No ephemeral streams or washes occur within the study area.

Recommended Protection Measures:

If possible, removal of the vegetation will occur outside the breeding season for migratory birds. Nesting generally lasts from February to July but may extend beyond this time frame. If vegetation removal will occur during or close to the nesting season, a qualified biologist will survey all areas to be disturbed as close as possible but no more than one week prior to removal. If active bird nests are found impacts to nests will be avoided by either delaying work or establishing initial buffer areas of a minimum of 500 feet (152.4 m) around active raptor nests or 50 feet (15 m) around smaller migratory bird species nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

Regulations for Joshua trees in force at the time this project is developed should be followed whether that is an ITP due to listing, a permit under the Act, or application of Palmdale Municipal Ordinance, Title 14, Chapter 14-04.

Significance: Given the adjacent land uses, and highly impacted condition of the study area this project would not result in an adverse impact to biological resources.

Development has been proposed for APN 3020-041-001 (Figure 1). Development may include installation of access roads, parking, and utilities (water, sewer, electric, etc.). The entire project area would be graded prior to construction activities.

An assessment of biological resources is an integral part of environmental analyses (Gilbert and Dodds 1987). The purpose of this study was to provide an assessment of biological resources potentially occurring within or utilizing the proposed project area. Specific focus was on the presence/absence of rare, threatened and endangered species of plants and wildlife. Species of concern included the desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), desert kit fox (*Vulpes macrotis)*, desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohanense*), alkali mariposa lily (*Calochortus striatus*), and Joshua tree (*Yucca brevifolia*).

Study Area

The approximately 8.5 acre (3.4 ha) study area was located north of Avenue R, and west of 40th Street East, T6N, R11W, a portion of the SE1/4 of the SE1/4 of Section 29, S.B.B.M. (Figures 2 and 3). Avenue R formed the southern boundary of the study site. A high school existed south of Avenue R. Block walls and single family housing were present along the north and west boundaries of the study site. The eastern boundary was formed by 40th Street East. Single family homes were present east of 40th Street East.

Methods

A line transect survey was conducted to inventory plant and wildlife species occurring within the proposed project area (Cooperrider et al. 1986, Davis 1990). The USFWS (2010) has provided recommendations for survey methodology to determine presence/absence and abundance/distribution of desert tortoises. Line transects were walked in a north-south orientation within the study site. Line transects were approximately 550 feet (167.6 m) long and spaced approximately 45 feet (13.8 m) apart (U.S. Fish & Wildlife Service 2010). The California Department of Fish and Game (2012) prepared recommendations for burrowing owl survey methodology. Consistent with the survey protocol the entire site was surveyed, and adjacent areas were evaluated (CDFG 2012). A habitat assessment was conducted for Mohave ground squirrels (MGS) to determine whether potential habitat was present for the species (CDFW 2019, Leitner and Leitner 2017).

All observations of plant and animal species were recorded in field notes. Field guides were used to aid in the identification of plant and animal species (Arnett and Jacques 1981, Borror and White 1970, Burt and Grossenheider 1976, Gould 1981, Jaeger 1969, Knobel 1980, Robbins et al. 1983, Stark 2000). Observations were aided with the use of 10x42 binoculars. Observations of animal tracks, scat, and burrows were also utilized to determine the presence of wildlife species inhabiting the proposed project area (Cooperrider et al. 1986, Halfpenny 1986, Lowrey 2006, Murie 1974). California Natural Diversity Database (CNDDB 2020), eBird, the USGS topographic map of the study area, and nearby biological surveys (Hagan 2022a-b, 2023) were reviewed. Photographs of the study site were taken (Figure 4).

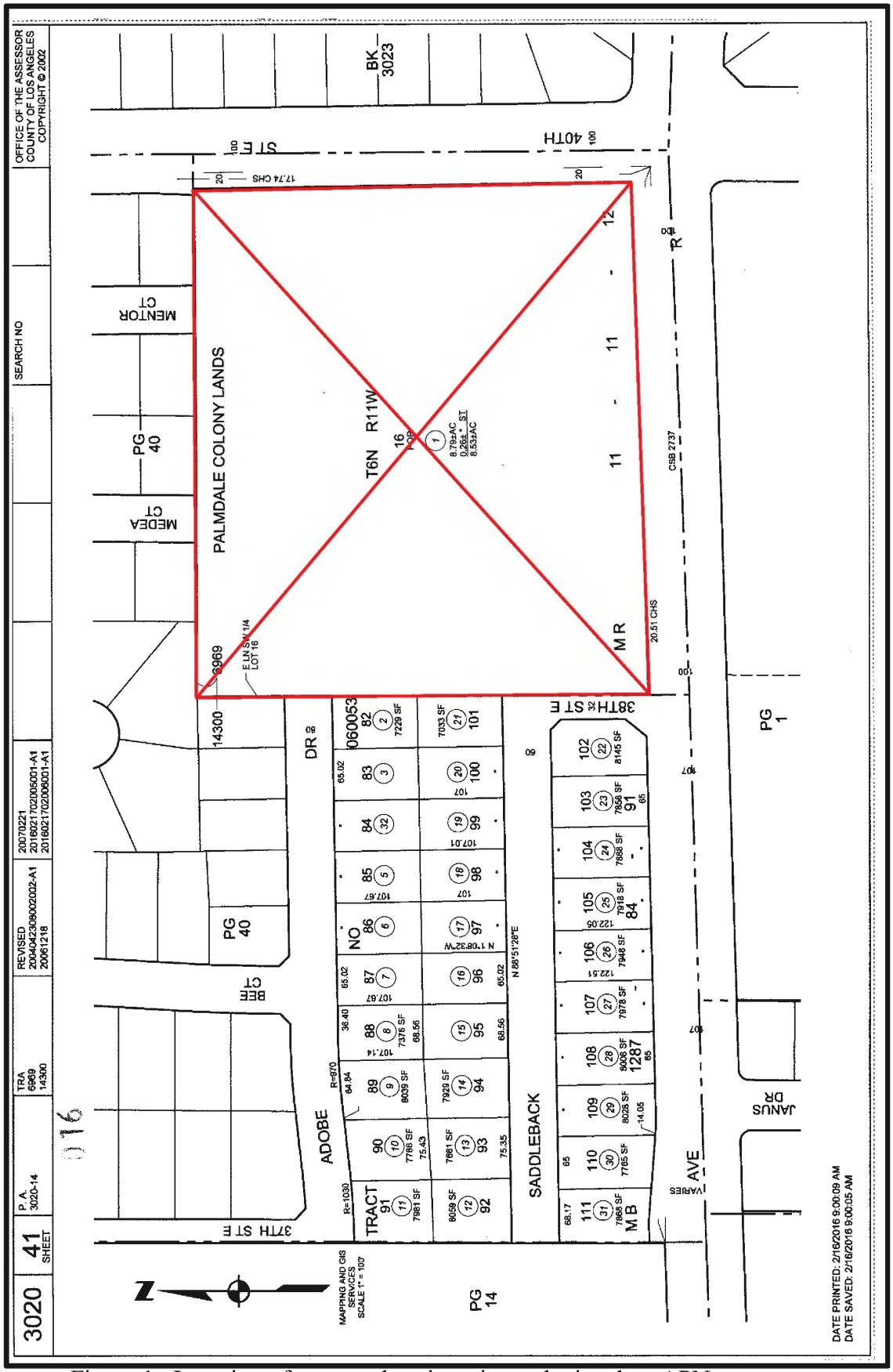

Figure 1. Location of proposed project site as depicted on APN map.

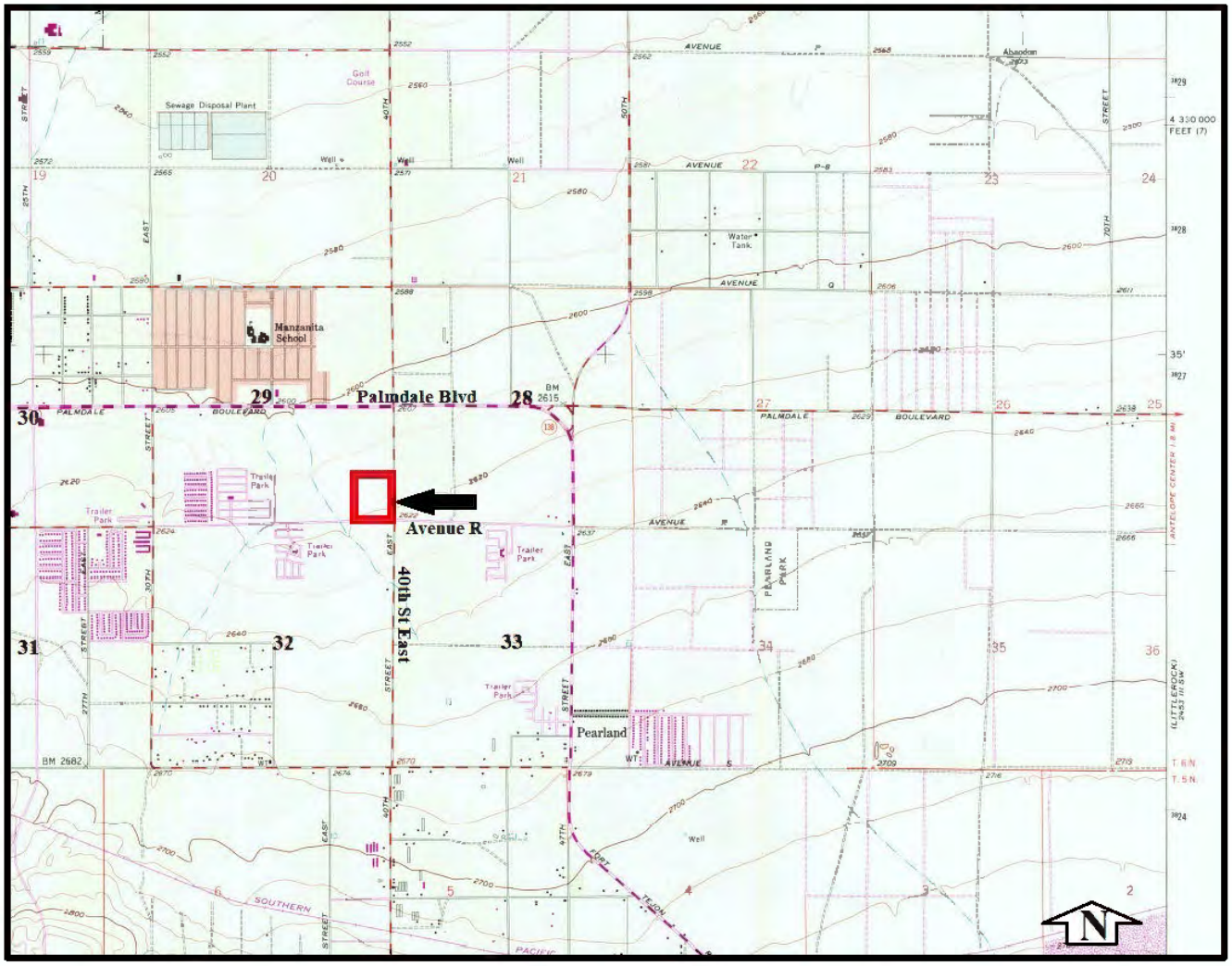

Figure 2. Approximate location of study area as depicted on excerpt from USGS Quadrangle, Palmdale, California, 7.5', 1974.

Figure 3. Approximate location of study area, Google Earth, April 2018, showing surrounding land use.

Figure 4. Representative photographs of the study area.

Results

A total of 12 line transects were walked on 5 May 2023. Weather conditions consisted of warm temperatures (estimated 60 degrees F), 50% cloud cover, and moderate to high winds. Sandy loam surface soil texture was observed within the study area. Topography of the study area was approximately 2,620 feet (798.5 m) above sea level. There were no blue line streams delineated on the U.S.G.S. topographic map within the study area. There were no washes or streams observed within the project site.

The proposed project area was characteristic of a highly impacted lot with remnant native vegetation. A total of 30 plant species were observed during the line transect survey (Table 1). The study site was nearly devoid of perennial shrub species. Red-stem filaree (*Erodium cicutarium*) was the dominant annual species observed within the study area. Sixteen Joshua trees were observed within the study site (Table 2). No desert cymopterus, Barstow woolly sunflowers, or alkali mariposa lilies were observed within the study site. No suitable habitat for alkali mariposa lilies, Barstow woolly sunflowers or desert cymopterus was observed within the study site.

A total of 14 wildlife species or their sign were observed during the line transect survey (Table 3). No desert tortoises or their sign were observed during the field survey. No suitable desert tortoise habitat was observed within the study site. No burrowing owls or their sign were observed within the study site during the field survey. California ground squirrels (*Citellus beecheyi*) and their burrows were observed within the study site. No bird nests were observed within the study area. No suitable forage or nesting opportunity was present within the study area for Swainson's hawks. Vegetation within the study site provides suitable habitat for some nesting migratory birds. No Swainson's hawk nesting sites have been documented within 5 miles of the study site (CNDDB 2020, eBird 2023). No desert kit foxes, dens, or tracks were observed within the study site. No Mohave ground squirrels were observed or audibly detected. No suitable Mohave ground squirrel habitat was observed within the study site.

Off highway vehicle (OHV) tracks were observed within the study site. Scattered litter and debris were observed within the study site. Four dump sites were present within the study site. Construction debris (bathroom/house remodel) was present within the study site. Gravel and crushed asphalt were present within the south and southeast corner of the study site. Soil piles and broken concrete were present within the study site. Utility manhole was observed within the study site. What appeared to be an air vac for a water line well was present within the north portion of the study site. Cul de sacs were present within the study site originating from adjacent housing developments.

Discussion

It is likely most annual species were visible during the time the field survey was performed. Although not observed, several wildlife species would be expected to occur within the proposed project area (Table 4).

Table 1. List of plant species that were observed during the line transect survey of APN 3020-041-001, Palmdale, California.

Common Name	Scientific Name
Joshua tree	*Yucca brevifolia*
Creosote bush	*Larrea tridentata*
Great basin sagebrush	*Artemisia tridentata*
Mormon tea	*Ephedra nevadensis*
Peachthorn	*Lycium cooperi*
Paper bag bush	*Salazaria mexicana*
Rabbit brush	*Chrysothamnus nauseosis*
Flattop buckwheat	*Eriogonum deflexum*
California buckwheat	*Eriogonum fasciculatum*
Jimson weed	*Datura meteloides*
Woolly aster	*Corethrogune filaginifolia*
Turkey mullein	*Eremocarpus setigerus*
Slender keel fruit	*Tropidocarpum gracile*
Blue dicks	*Dichelostemma capitatum*
Desert dandelion	*Malacothrix glabrata*
Goldfields	*Lasthenia californica*
Comb-bur	*Pectocarya recurvata*
Fiddleneck	*Amsinckia tessellata*
Apricot mallow	*Sphaeralcea ambiqua*
Rattlesnake weed	*Euphorbia albomarginata*
Red-stem filaree	*Erodium cicutarium*
Annual burweed	*Franseria acanthicarpa*
Russian thistle	*Salsola iberica*
Sahara mustard	*Brassica tournefortii*
Tumble mustard	*Sisymbrium altisissiimum*
Schismus	*Schismus* sp.
Foxtail barley	*Hordeum leporinum*
Squirrel-tail grass	*Hordeum jubatum*
Cheat grass	*Bromus tectorum*
Lavender	*Lavandula* sp.

Table 2. Number of Joshua trees by size class occurring within APN 3020-041-001.

Size Class of Joshua trees (in feet)	**Total Number of Joshua trees (8 Acres)**
1-3	8
4-6	0
7-9	1
10-12	2
>13	5
Total	16

(All in good condition except one 12 foot in fair)

Table 3. List of wildlife species, or their sign, that were observed during the line transect survey of APN 3020-041-001, Palmdale, California.

Common Name	Scientific Name
Rodents	Order: Rodentia
California ground squirrel	*Citellus beecheyi*
Desert cottontail	*Sylvilagus auduboni*
Rock dove	*Columba livia*
Black-chinned hummingbird	*Archilochus alexandri*
Common raven	*Corvus corax*
Say's phoebe	*Sayornis saya*
House finch	Carpodacus mexicanus
European starling	*Sturnus vulgaris*
Ladybird beetle	Hippodamia convergens
Grasshopper	Order: Orthoptera
True bug	Order: Hemiptera
Fly	Order: Diptera
Harvester Ants	Order: Hymenoptera

Table 4. List of wildlife species that may occur within the proposed study area, APN 3020-041-001, Palmdale, California.

Common Name	Scientific Name
Deer mouse	*Peromyscus maniculatus*
Domestic dog	*Canis familiaris*
Domestic cat	*Felis* sp.
Side blotched lizard	*Uta stansburiana*
Northern mockingbird	*Mimus polyglottos*
Horned lark	*Eremophila alpestris*
Spider	Order: Araneida

Human impacts within the study area are expected to continue. Habitat in the general area consisted of an urban environment with development on all four sides of the study site. Burrowing animals within the proposed project area are not expected to survive construction activities. More mobile species, such as birds, are expected to survive construction activities. Development of this site will result in a minimal loss of cover and foraging opportunities for the common wildlife species occurring within and adjacent to the study area.

The desert tortoise is a state endangered and federal listed threatened species. The proposed project area was located within the geographic range of the desert tortoise. The proposed project site was not located in critical habitat designated for the Mojave population of the desert tortoise. Based on the location, condition, and results of the field survey, desert tortoises are not present within the study area. No protection measures are recommended for desert tortoises.

The Mohave ground squirrel (MGS) is a state listed threatened species. The proposed project site was located within the geographic range of the MGS. The western limit of the geographic range of the Mohave ground squirrel is currently thought to be Highway 14. Suitable habitat was not present within or adjacent to the study site. No MGS have been documented in Palmdale since the 1990s (CNDBB 2020, CDFW 2019). MGS are not present within the study area. No protection measures are recommended for MGS.

Burrowing owls are considered a species of special concern by the CDFW. No burrowing owls or their sign were observed within the study area. California ground squirrel burrows were present that may be used as cover sites by burrowing owls. However, high human activity within the study site precludes burrowing owl presence. No protection measures are recommended for burrowing owls.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. The Joshua trees and few shrubs within the study area offers potential nesting habitat for smaller migratory birds.

Swainson's hawk is a state threatened listed species. Based on an assessment of the pattern of Swainson's hawk sightings documented over time it does not appear Swainson's hawk are using this area or are expected (eBird 2022). Swainson's hawk observations appear to be strongly correlated to active agricultural fields, parks, and large retention basins within the Antelope Valley (eBird 2022, CNDDB 2020). No Swainson's hawk nests have been documented within 5 miles of the study site (CNDDB 2020, eBird 2023). Suitable foraging habitat is not available within this study site. No Swainson's hawks are expected to use this study site. No minimization measures for Swainson's hawks are recommended.

Joshua trees are currently a candidate species for listing under the California Endangered Species Act. They are afforded the same protection as though already listed requiring the submittal of an Incidental Take Permit. This is expected to change sometime in the Summer of 2023 when they will be removed as a candidate species and protected under new legislation called "The Joshua Tree Act" or removed from consideration for protection altogether. The 16

Joshua trees observed on site were clustered in the eastern portion of the study site (Figure 5). No suitable habitat for other sensitive plant species was observed within the study site. Based on the results of the field survey no other sensitive plant species are expected to occur within the study area and no protection measures are recommended. No other state or federal listed species are expected to occur within the proposed project area (California Department of Fish and Wildlife 2023a-b).

Landscape design should incorporate the use of native plants to the maximum extent feasible. Native plants that have food and cover value to wildlife should be used in landscape design (Adams and Dove 1989). Diversity of native plants should be maximized in landscape design (Adams and Dove 1989).

Recommended Protection Measures:

If possible, removal of the vegetation will occur outside the breeding season for migratory birds. Nesting generally lasts from February to July but may extend beyond this time frame. If vegetation removal will occur during or close to the nesting season, a qualified biologist will survey all areas to be disturbed as close as possible but no more than one week prior to removal. If active bird nests are found impacts to nests will be avoided by either delaying work or establishing initial buffer areas of a minimum of 500 feet (152.4 m) around active raptor nests or 50 feet (15 m) around smaller migratory bird species nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.

Regulations for Joshua trees in force at the time this project is developed should be followed whether that is an ITP due to listing, a permit under the Act, or application of Palmdale Municipal Ordinance, Title 14, Chapter 14-04.

Significance: Given the adjacent land uses, and highly impacted condition of the study area this project would not result in an adverse impact to biological resources.

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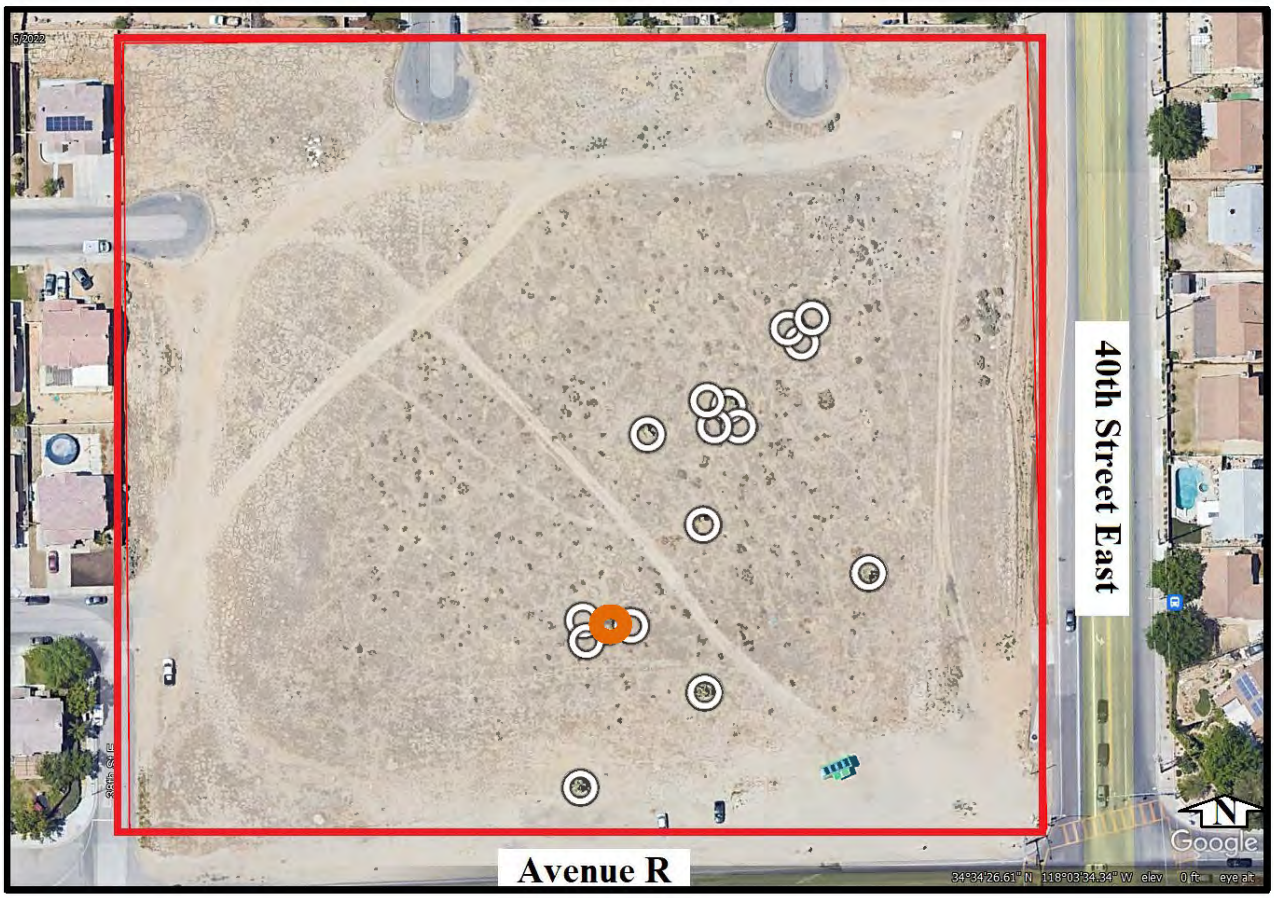

Figure 5. Approximate location and distribution of the Joshua trees on a Google Earth aerial 2022. White circles indicate Joshua trees in good condition, one orange circle indicates Joshua tree in fair condition. Multiple circles are indicative of 1 large tree and smaller trees at or very near the base of the larger tree but their actual proximity to the large tree is much closer than depicted.

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Appendix C Monitoring Mitigation Reporting Plan

BIOLOGICAL RESOURCES	Mitigation Measure
Migratory birds may use suitable nesting habitat within the project site. The following measures will be implemented prior to construction.	BIO-1: Removal of the vegetation will occur outside the breeding season for migratory birds if possible. Nesting generally lasts from February to July but may extend beyond this time frame. If vegetation removal will occur during or close to the nesting season, a qualified biologist will survey all areas to be disturbed as close as possible but no more than one week prior to removal. If active bird nests are found impacts to nests will be avoided by either delaying work or establishing initial buffer areas of a minimum of 500 feet (152.4 m) around active raptor nests or 50 feet (15 m) around smaller migratory bird species nests. The project biologist will determine if the buffer areas should be increased or decreased based on the nesting bird response to disturbances.
Joshua trees, a candidate species for listing under the California Endangered Species Act, are present within the study site. The following measure will be implemented prior to construction.	BIO-2: An Incidental Take Permit for the WJT must be processed either under CESA or the WJTCA and either mitigation banking or mitigation funds paid to protect WJTs prior to development.

Timing: Prior to development
Implementing Entity: Developer/Project Proponent
Monitoring Agency: California Department of Fish and Wildlife and the City of Palmdale Planning Department or it's designee

CULTURAL RESOURCES	Mitigation Measure
In the event resources or remains are discovered during project activities the following measures will be implemented.	CUL-1: Inadvertent Discovery of Archaeological Resources. If archaeological resources are encountered during implementation of the Project, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. The Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) and the Fernandeño Tataviam Band of Mission Indians (FTBMI) shall be contacted, as detailed within TCR-1, regarding any pre-contact and/or post-contact finds and be provided information after the archaeologist makes their initial assessment of the nature of the find, to provide Tribal input with regards to significance and treatment. If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly. CUL-2: Human Remains. If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.
Timing: During development	
Implementing Entity: Developer will include as part of construction contract/specifications.	
Monitoring Agency: City of Palmdale Planning Department or it's designee	

GEOLOGY AND SOILS	Mitigation Measure
In the event of inadvertent findings during construction activities the following measures will be implemented.	GEO-1: Inadvertent Discovery of Paleontological Resources. If paleontological resources are encountered during implementation of the Project, ground-disturbing activities will be temporarily redirected from the vicinity of the find. A qualified paleontologist (the "Project Paleontologist") shall be retained by the developer to make an evaluation of the find. If the resource is significant, Mitigation Measure GEO-2 shall apply. GEO-2: Paleontological Treatment Plan. If a significant paleontological resource(s) is discovered on the property, in consultation with the Project proponent and the City, the qualified paleontologist shall develop a plan of mitigation which shall include salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation in the find a local qualified repository, and preparation of a report summarizing the find.
Timing: Prior to development	
Implementing Entity: Developer/Project Proponent	
Monitoring Agency: California Department of Fish and Wildlife and the City of Palmdale Planning Department or it's designee	

TRIBAL CULTURAL RESOURCES	Mitigation Measure
In the event cultural resources or remains are discovered during project activities the following measures will be implemented to address Tribal concerns.	TRIB-1. The YSMN and FTBMI shall be contacted, as detailed in CR-1, of any pre-contact and/or post-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with FTBMI and YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN and FTBMI for the remainder of the project, should they elect to place a monitor on-site. TRIB-2. All archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to FTBMI and YSMN. The Lead Agency and/or applicant shall, in good faith, consult with them throughout the life of the project. TRIB-3. Inadvertent discoveries of human remains and/or funerary object(s) are subject to California State Health and Safety Code Section 7050.5, and the subsequent disposition of those discoveries shall be decided by the Most Likely Descendant (MLD), as determined by the Native American Heritage Commission (NAHC), should those findings be determined as Native American in origin.
Timing: During development	
Implementing Entity: Developer will include as part of construction contract/specifications.	
Monitoring Agency: City of Palmdale Planning Department or it's designee	

Appendix D Cultural Resource Report

A
PHASE I CULTURAL RESOURCE SURVEY
FOR PROPERTY AT
40th STREET EAST AND AVENUE R,
CITY OF PALMDALE, CALIFORNIA

Submitted to:
Fred Matian
1718 Westwood Boulevard
Los Angeles, California 90024

c/o

Civil Design and Drafting, Inc.
885 Patriot Drive, Unit C
Moorpark, California 93021

Keywords:
Palmdale 7.5' Quadrangle, City of Palmdale
California Environmental Quality Act

Submitted by:
Hudlow Cultural Resource Associates
1405 Sutter Lane
Bakersfield, California 93309

Author:
Scott M. Hudlow

April 2022

Management Summary

At the request of Fred Matian, a Phase I Cultural Resource Survey was conducted on approximately eight acres. The property lies at the northwest corner of 40th Street East and Avenue R in the City of Palmdale, California. The Phase I Cultural Resource Survey consisted of a pedestrian survey of the eight-acre site and a cultural resource record search.

No cultural resources were identified. No further work is required. If archaeological resources are encountered during the course of construction, a qualified archaeologist should be consulted for further evaluation.

If human remains or potential human remains are observed during construction, work in the vicinity of the remains will cease, and they will be treated in accordance with the provisions of State Health and Safety Code Section 7050.5. The protection of human remains follows California Public Resources Codes, Sections 5097.94, 5097.98, and 5097.99.

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1.0 Introduction

At the request of Fred Matian, *Hudlow Cultural Resource Associates* conducted a Phase I Cultural Resource Survey on approximately eight acres. The property sits at the northwest corner of 40th Street East and Avenue R in the City of Palmdale, California. This project is being undertaken in accordance with the California Environmental Quality Act (CEQA) with the City of Palmdale responsible as Lead Agency to implement CEQA. The Phase I Cultural Resource Survey consisted of a pedestrian survey and a cultural resource record search.

2.0 Survey Location

The project area is in the City of Palmdale. The parcel is the SE ¼ of the SE ¼ of the SE ¼ of the SE ¼ of Section 29, T.6N., R.11W., San Bernardino Baseline and Meridian, as displayed on the United States Geological Survey (USGS) Palmdale 7.5-minute quadrangle map at the northwest corner of 40th Street East and Avenue R in the City of Palmdale, California (Figure 1).

3.0 Record Search

A record search of the project area and the environs within one-half mile was conducted at the South Central Coast Information Center. Information Center staff conducted the record search on April 19, 2022. The record search revealed that fifteen cultural resource surveys have been conducted within one-half mile radius of the project area, including two surveys, which previously addressed the current project area (Norwood 1990 and Tetra Tech 2003). Two cultural resources have been recorded within one half-mile of the current project area; one is a historic road and one is a historic homestead. No cultural resources have been identified within the current project area.

4.0 Environmental Background

The project area is found southwest of the Little Rock Wash and east of Quartz Hill in the Antelope Valley portion of the western Mojave Desert. The project area is found at an elevation of approximately 2620 feet above mean sea level. The project area was found within a Joshua tree environmental zone; however, it is now covered with a succession of low weeds, trash, and trails (Figures 2 and 3).

5.0 Prehistoric Archaeological Context

A generally accepted prehistoric cultural chronology for the western Mojave Desert region has yet to be developed, partially because sparse local chronometric data is available to use as a foundation. Consequently, most proposed local culture histories have been borrowed from other regions, with minor modifications based on sparse local data. The most common pattern is

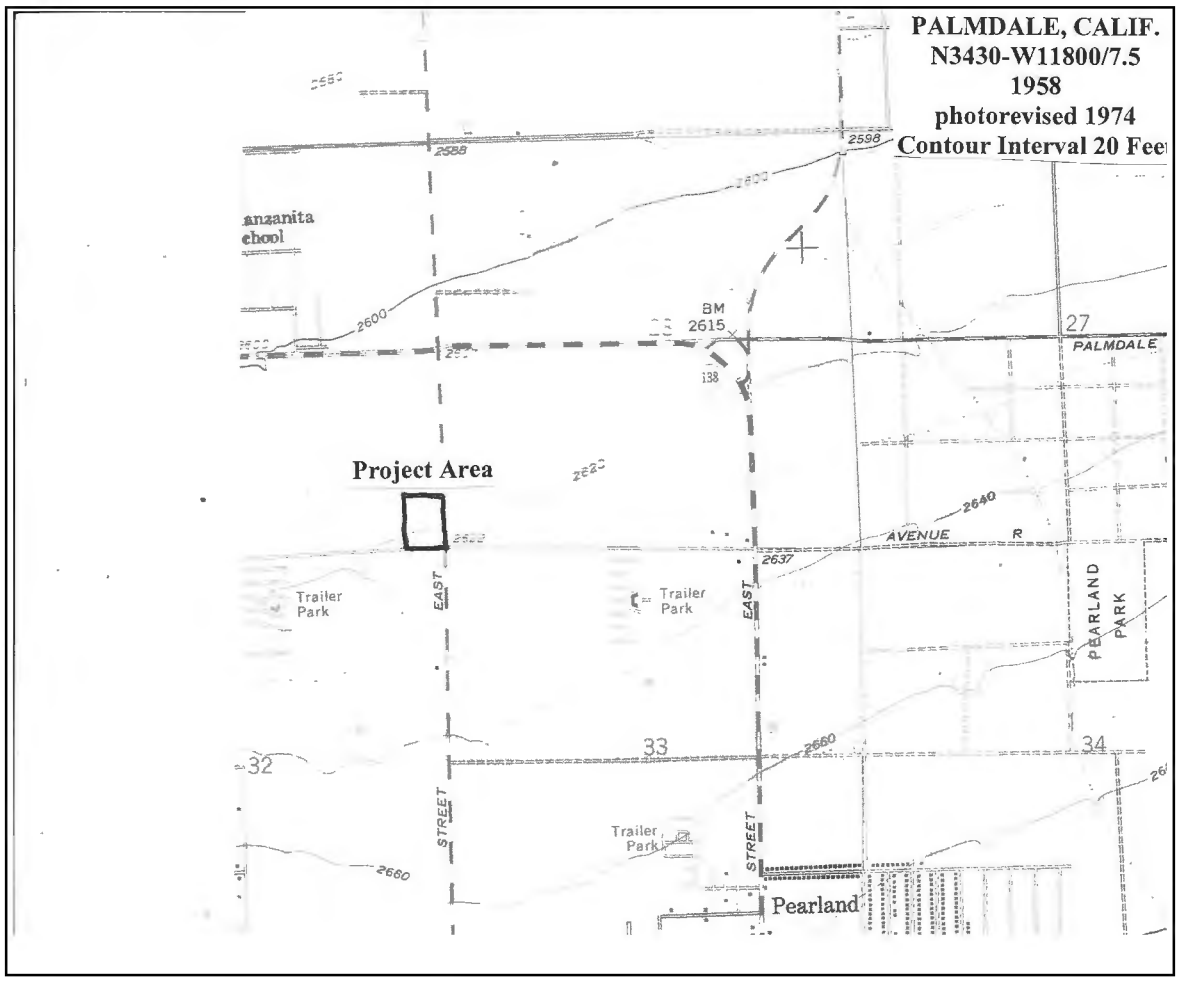

Figure 1
Project Area Location Map

the tripartite Early/Middle/ Late sequence familiar in Californian culture history, often with the addition of a Post-Contact (Norwood 1987) or Protohistoric Period (Sutton 1988). The differences between the sequences are mainly in the inclusion of various horizons, technologies, or stages. The following chronology is based on Claude Warren's Lake Mojave, Pinto, Gypsum, Saratoga Springs, and Protohistoric Periods, which is partially based on time-sensitive projectile points and shell bead sequences (Warren 1984; Warren and Crabtree 1986).

Lake Mojave Period - ca. 10,000-5,000 B.C.

Most Lake Mojave Period sites within the northern Mojave Desert and southwestern Great Basin are early Holocene lakeshore occupations. Sutton stated that the subsistence strategy during this period was presumably one of hunting and utilization of lacustrine resources (Sutton 1988:30). The best examples of sites from this period are associated with the shoreline of Pleistocene Lake Mojave (Campbell *et al.* 1937). Artifacts include percussion-flaked foliate points and knives, Lake Mojave and Silver Lake projectile points, and an unspecialized tool kit of scrapers, gravers, and perforating tools.

Pinto Period - ca. 5,000-2,000 B.C.

Some scholars have interpreted the association of Pinto Basin sites and a now extinct riverbed as indicative of occupation during a time of abundant moisture (Campbell and Campbell 1935). Settlement patterns appear to be associated with ephemeral lakes and now-dry streams and springs (Warren 1984). Though the Pinto Period is roughly concurrent with the Altithermal climatic event, (a time when human populations were supposedly reduced in size and more widely dispersed due to the desiccation of wetter habitats), the occurrence of a milder, wetter, Little Pluvial period within the Altithermal has been noted by several archaeologists (Moratto 1984:546). The extent to which the Little Pluvial climatic period may coincide with Pinto Period sites is unknown.

To date, at least seventeen Pinto points and six Pinto Period sites have been recorded in the vicinity (Campbell 1994a). Norwood (1987:104) noted that the lowland areas in the northern portions of adjacent Edwards Air Force Base (AFB) contain evidence of substantial occupations which may date to the Pinto Period; such a conclusion would contradict the hypothesis of a small, dispersed population distribution at this time. Recent evaluation of a Lake Mojave/Pinto Period site at Phillips Laboratory supports Norwood's observation about substantial occupations (Campbell 1994b).

Gypsum Period - ca. 2000 B.C.-A.D. 500

During the Gypsum Period, evidence of a millingstone culture becomes much more common. The mortar and pestle were probably introduced during this

Figure 2
Project Area, View to the Northwest

Figure 3
Project Area, View to the East

period (Wallace 1955:222-223; Warren 1984:4163). Wallace noted evidence of expanded subsistence activities where late period peoples around Mesquite Flat were believed to have extended their food-collecting activities into the surrounding mountains (Wallace 1977:121).

A gradual transition from the use of large dart points to smaller projectile points associated with use of the bow and arrow occurred toward the end of the Gypsum Period. Approximately A.D. 500, the bow and arrow essentially replaced the atlatl (a device used for throwing spears or darts that consists of a rod with a hook at the rear end to hold the projectile in place until release) (Warren 1984:415). Shutler postulated that Anasazi ceramics were initially introduced into the eastern Mojave at about the same time (Shutler *et al* 1961). Diagnostic projectile points associated with the Gypsum Period include the Humboldt, Gypsum Cave, Elko Eared, and Elko Corner-notched types (Warren 1984:414-415). Other temporal designations, which may be correlated with Warren's Gypsum Period, include the Early and Middle Rose Spring Periods (Lanning 1963; Clewlow *et al.* 1970) and the Newberry Period (Bettinger and Taylor 1974).

The scant published literature reports relatively little local evidence of Gypsum material (Robinson 1977:45; Sutton 1988:38). Norwood (1987:101-104) however, notes several isolated examples of projectile points from this period at Edwards AFB. A study of projectile points in the Base Historic Preservation Officer's database has identified ten Humboldt points, four Elko Corner-notched points, one Elko Side-notched point, five undifferentiated Elko points, and three Gypsum Cave points (Campbell 1994a). If isolated points are eliminated from the sample, the remaining 17 points from the Gypsum Period come from 16 sites. Radiocarbon data identifies another five Antelope Valley sites (LAN-82, LAN-192, KER-303, KER-526, and KER-533) with materials that fall within the Gypsum Period. Hydration readings suggest the possibility that a number of additional Gypsum Period sites are present. Therefore, a Gypsum presence in the area is well represented.

Saratoga Springs Period - ca. A.D. 500-1200

The Saratoga Springs Period is marked by what appears to be the establishment of large villages, or village complexes. This reflects a transition from the previous seasonal transhumance pattern into one of semi-, or fully-sedentary occupation within the Antelope Valley (Sutton 1988).

This period also marks the beginning of the Shoshonean period, named for the Shoshonean peoples who occupied the Western Mojave Desert during this period (Robinson 1977). The Numic and Takic Shoshonean groups were expanding during this period. Both groups made use of a millingstone technology-- other aspects of their material culture include marine shell, bone, and perishable artifacts. Takic sociopolitical organizations differ from those of Northern Numic groups. The Kitanemuk (a Takic group) are reported as having well developed social ranking and prestige systems (Blackburn and Bean 1978).

Grover Krantz postulated that the Takic expansion to the south was stimulated by Northern groups who "...overran their neighbors for a considerable distance to the south" (Krantz 1978:64) in order to obtain acorn resources. This migration occurred at about 2000 B.P. (Sutton 1988:40).

Time-sensitive projectile points from this period include the Rose Spring, Cottonwood, and Desert Side-Notched series. It has been argued that assemblages with Cottonwood points and no Desert Side-Notched points represent an earlier occupation than sites with both Cottonwood and Desert Side-notched points, and that the earlier occupation is associated with the Hakataya influence from the Southwest (Warren 1984:423-424; Warren and Crabtree 1986:191). In the western Mojave Desert, diagnostic materials from this period include various types or examples of poorly understood brownware pottery and desert side notch series projectile points (Warren and Crabtree 1986:191). The use of pottery in the Antelope Valley is currently poorly understood.

A current local projectile point database includes four complete Rose Spring points and three projectile point fragments identified as Rose Spring. These seven items were recovered from six sites (CA-KER-562, CA-KER-672, CA-KER-1171, CA-KER-2533, CA-KER-2817, and CA-LAN-828). Twenty-five complete points and twenty-seven point fragments recovered from twenty sites represent the Cottonwood series of projectile points (Campbell 1994a). One complete Desert Side-notched point and three fragments identified as Desert Side-notched have been recovered from four sites (CA-KER-672, CA-KER-1180, CA-KER-2025, and CA-LAN-769).

Protohistoric Period- ca. A.D. 1200-Historic

Warren used the term "Protohistoric" to describe the period, which reflects a transition from the prehistoric to historic eras (Warren 1984). However, Arkush, noting this term has distinct cultural implications, argued this time is more properly designated the "Late Archaic," while many archaeologists colloquially call this period the "Late Prehistoric" (Arkush 1990:29). This period is also termed the "Shoshonean" Period (Warren 1984; Warren and Crabtree 1986), potentially clouding the culture history sequence by adding a name, which has cultural and linguistic meanings when describing modern groups. Whatever its name, the period markers are considered to be Desert Side-notched arrow points "...and various poorly defined types of brownware pottery including Owens Valley Brownware" (Warren and Crabtree 1986:191).

This period reflects a continuation of cultural developments established during the previous period, but with adaptive modifications. Trade along the Mojave River likely affected the people of the Eastern Antelope Valley, allowing active groups to acquire considerable amounts of wealth. Socioeconomic and sociopolitical organizations continued to increase in complexity. However, most Antelope Valley groups appear to have developed stronger ties with coastal groups rather than those of the eastern desert and Great Basin (Warren

1984:426). By approximately A.D. 1300, the Hakataya expansion reached its western extreme. Warren (1984) interprets the paucity of ceramic ware in Antelope Valley village sites as evidence that Hakatayan influence upon local groups was minimal.

6.0 Ethnographic Background

The "Contact" period is difficult to define in theory and to detect in practice. The earliest contact between the native populations of the New and Old Worlds traditionally dates to Columbus' landfall. Native Americans felt the Europeans' impact (and later, the Euro-Americans) in a variety of ways, and direct, face-to-face contact was not necessary for their lives to be changed irrevocably. For example, trade items like guns, horses, metal, and cloth spread quickly, and were rapidly incorporated into the indigenous cultures; in many cases, trade with Europeans altered an entire culture or dramatically shifted power balances between groups. Diseases to which Native Americans had little or no resistance preceded the Euro-Americans to the furthest corners of the continent, decimating entire populations within months (Cook 1955). Specific types of osteological damage or mass burials can indicate the onset of Euro-American diseases. However, such evidence has been elusive. Thus, "contact" in North America is usually perceived by anthropologists not as a single point in time, but rather, as a period of centuries, the beginning and ending points of which are frustratingly vague and vary from region to region. Such population shifts rippled across the continent, exacerbated by the expansion of European and Euro-American settlements. Even word-of-mouth spread the news of alien people, goods, and events.

In the archaeological record, clear evidence of contact takes three forms: a mix of aboriginal and Euro-American artifacts, aboriginal-style artifacts made from Euro-American materials (e.g., glass projectile points or thimble tinklers), or European forms, designs, and motifs utilized in aboriginal crafts (i.e. basketry or pottery).

The term "Protohistoric" is also sometimes used in this context. Arkush (1990:29) defined this Protohistoric Period as "...a distinct span of time during which native cultures were modified by the introduction of Euro-American diseases, material, and/or practices prior to intensive, face-to-face contact with whites." In fact, historical documents from explorers and others describe many tribes long before "intensive" contact occurred, and other groups experienced such contact without much, if any, historical documentation.

Just as the dates are hard to define, it is a challenge to determine which aboriginal groups inhabited the Antelope Valley, particularly the area, which is now Edwards AFB. Generally, people occupied core areas in the hills and mountains surrounding the valley and traveled into the desert to gather particular plants, or to escape mountain weather; consequently, the desert boundaries were neither strict nor firmly embedded in the "memory culture" of the ethnographic present. The peripatetic hunter-gatherers of the area do not

seem to have been particularly territorial. According to Earle, Harrington's informants indicated "...that all of the clan groups of Serrano/Haminat speech affiliation north of Cajon Pass and east of Soledad Pass constituted a single ethnic domain," although differences in dialect, social organization, and material culture are present (Earle 1990:97).

To add to the ethnographic tangle, or perhaps causing some of it, the cultures of the Antelope Valley were severely impacted by repeated diasporas, a common tale in California: first, missionization under the Spanish; then transfer to "reserved" land under the Americans; then dispossession from the reservations as the land was converted (sometimes questionably) to claims by Euro-Americans under the Homestead Laws, and last, another removal to still more distant reservations or marginal land.

Each dislocation effectively removed the people further from the traditional patterns of the generations before, adding a new layer of custom and habit, creating a cultural mosaic by the time ethnographers arrived.

For these and a variety of other reasons, determining contact-period aboriginal territories on the Base may be a futile exercise, if not impossible. In fact, in the available ethnographic territorial information for the Antelope Valley, by far the vaguest data concerns an area almost exactly described by the boundaries of Edwards AFB.

In the following discussions, it should be kept firmly in mind that the "territories" are all somewhat arbitrary, descriptions from "memory culture," and different author's comments may be based on the same sources, giving a false impression of corroborating evidence. Generally, four groups occupied the western Mojave at the time of contact: Kitanemuk, Tataviam ("Alliklik"), Kawaiisu, and Vanyume ("Serrano"). Additionally, other groups, particularly the Mojave from the east, were known to pass through the area while trading with coastal groups. The Kawaiisu are known to have occasionally utilized portions of the Base (Cultural Systems Research 1980:190-191). Lowell Bean and Sylvia Brakke Vane speculated the Tataviam and Gabrielino may have also exploited resources found on the Base. It is also probable that Mojave and Quechan groups, wide-ranging travelers and traders, utilized resources as they passed through the region (Cultural Systems Research 1980:191).

Kitanemuk and Tataviam

The Kitanemuk and the Tataviam occupied the western portion of the Antelope Valley, but no distinct line can be drawn between their lands. Kroeber's description of Tataviam (or, as he called them, "Alliklik") territory did not include the Antelope Valley, but clearly was centered on the nearby upper Santa Clara River in the mountains west of the valley (Kroeber 1925: 556). According to Kroeber, the Sawmill Mountains and adjacent Liebre Mountains at the western rim of the valley were the territory of the Kitanemuk. King and Blackburn rejected this division, agreeing that the Tataviam were centered on

the southern-facing slopes of the Santa Clara River drainage, but arguing it was the Tataviam whose "...territory extended over the Sawmill Mountains to the north [of the Santa Clara River] to include at least the southwestern fringes of the Antelope Valley" and Lake Elizabeth (King and Blackburn 1978:535-536). Their map placed the Tataviam south of Pastoria Creek, midway up the western edge of the Antelope Valley.

Earle, however, compared Garcés diary, upon which most of the preceding discussions were based, against J. P. Harrington's unpublished notes. Earle determined that the "*Beñeme*" of whom Garcés wrote were Vanyume proper, not a generic name assigned by the Mojave to all local Indians. Such misinterpretations of Garcés' comments and place names resulted in the mis-assignment of the southwestern Antelope Valley to the Tataviam or Kitanemuk. Earle's conclusions seem stronger than earlier arguments, for they support a more straightforward reading of Garcés, agree with ethnographic testimony, and are consistent with the mission records.

Kawaiisu

Moving to the northern portion of the Antelope Valley, the Kawaiisu are generally agreed to have occupied the Sierra Nevada south of the Kern River fork (now Lake Isabella), and eastward for an unknown distance. Kroeber stated the Kawaiisu territory went to the boundaries of the "westernmost of the Chemehuevi [i.e., the Southern Paiute of California]" who "visited and owned" the northwestern corner of San Bernardino County--far north of Edwards AFB (Kroeber 1925:593, 594, 601).

On the other hand, Zigmond illustrated a far more limited range for the Kawaiisu, encompassing a "core area" from the northern edge of the Tehachapis to the fork of the Kern River (Zigmond 1986:398). Zigmond's map also indicates a seasonal range extending east just north of Rosamond Lake but dipping southeast to encompass Rogers Lake and the central portion of the Mojave River. This outline roughly agrees with the northeastern border of the Kitanemuk as defined by Blackburn and Bean. These boundaries should not be considered mutually exclusive, however, as among the Kawaiisu, "...the concept of territory was weakly developed, and the idea of boundary was probably nonexistent…. The characteristic shifting about in relation to the seasons makes it impossible to devise a static map of land occupation" (Zigmond 1986:398)

Vanyume

The last group is the Vanyume, occasionally referred to as "Serrano" in the literature (Kroeber 1925; Bean and Smith 1978). Kroeber stated they were found as far east as Barstow, a statement which would preclude their presence in the Antelope Valley. However, King and Blackburn (1978:535) speculated that "the major portion of the Antelope Valley itself was probably held by Kitanemuk and Vanyume speakers." Further clouding the issue, Bean and Smith (1978:570), writing about the Vanyume in the same volume, state the language of the Vanyume cannot be identified. Bean and Smith did not fully depict the

Vanyume territory in their map, omitting the northern and western portions, which may have included the Antelope Valley.

Earle correctly realized that the location of the Vanyume is the key to understanding the ethnogeography of the Antelope Valley. As previously mentioned, Harrington's notes revealed his Kitanemuk informants grouped the languages in the southern Antelope Valley and east to Cajon Pass under the name "Haminat." Dialect differences were noted and conform to the Kitanemuk, Serrano, and Vanyume "language" divisions of earlier research (Earle 1990: 98-99). This would indicate that an emphasis on determining (or despairing over) the ethnographic boundaries between these groups is wasted effort. A more productive approach, Earle argues, is an examination of the chiefs, clans and/or moieties, and *naciónes*, or intermediate sociopolitical groups, which seem to have been hierarchical and reflected in inter-village organization (Earle 1990:101).

7.0 Field Procedures and Methods

On March 24, 2022. Scott M. Hudlow (for qualifications see Appendix I) conducted a pedestrian survey of the entire project area. Hudlow surveyed in east/west transects at 15-meter (33 feet) intervals. All archaeological material more than fifty years of age or earlier encountered during the inventory would have been recorded.

8.0 Report of Findings

No cultural resources were identified.

9.0 Management Recommendations

At the request of Fred Matian, a Phase I Cultural Resource Survey was conducted on approximately eight acres. The property lies at the northwest corner of 40th Street East and Avenue R in the City of Palmdale, California. The Phase I Cultural Resource Survey consisted of a pedestrian survey of the eight-acre site and a cultural resource record search.

No cultural resources were identified. No further work is required. If archaeological resources are encountered during the course of construction, a qualified archaeologist should be consulted for further evaluation.

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Appendix I

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Education

The George Washington University
M.A. American Studies, 1993
Specialization in Historical Archaeology
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University of California, Berkeley
B.A. History, 1987
B.A. Anthropology, 1987
Specialization in Historical Archaeology
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Public Service

3/94-12/02 *Historic Preservation Commission*. City of Bakersfield, Bakersfield, California 93305.

7/97-12/01 *Newsletter Editor*. *California History Action,* newsletter for the California Council for the Promotion of History.

Relevant Work Experience

8/96- *Adjutant Faculty*. Bakersfield College, 1801 Panorama Drive, Bakersfield, California, 93305. Teach History 17A, Introduction to American History and Anthropology 5, Introduction to North American Indians.

Owner, Sole Proprietorship. Hudlow Cultural Resource Associates. 1405 Sutter Lane, Bakersfield California 93309. Operate small cultural resource management business. Manage contracts, respond to RFP's, bill clients, manage temporary employees. Conduct Phase I archaeological and architectural surveys for private and public clients; including the cultural resource survey, documentary photography, measured drawings, mapping of structures, filing of survey forms, historic research, assessing impact and writing reports. Evaluated archaeological and architectural sites and properties in lieu of their eligibility for the National Register of Historic Places in association with Section 106 and 110 requirements of the National Historic Preservation Act of 1966 and CEQA (California Environmental Quality Act).

Full resume available upon request.