



PALMDALE

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NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Pursuant to Title 14 of the California Code of Regulations, Sections 15072 and 15073, as amended to date, this is to advise that the City of Palmdale, which is the lead agency overseeing this project, has completed a Mitigated Negative Declaration for the proposed project described below.

Project No.: PAL-008 – North County ITS Palmdale Extension Project

Project Location: East Avenue R between 40th Street East and 70th Street East and East Avenue S between 55th Street East and 60th Street East in the City of Palmdale, County of Los Angeles, California.

Project Description: The project proposes to construct fiber optic interconnect, Closed Caption Television (CCTV) surveillance, traffic operations center (TOC) upgrades, and new and upgraded signals within the city. New traffic signal installations will require right of way acquisition to construct ultimate curb returns. The two project areas include portions of Avenue R and Avenue S, east of State Route 14 (Antelope Valley Freeway).

The North County Intelligent Transportation System (ITS) Palmdale Extension project will tie into existing fiber optic interconnect on Avenue R between the TOC and 40th Street East and extend new fiber west to 70th Street East to replace existing wireless communications at 55th Street East, 60th Street East, and Rockie Lane. In addition, new traffic signals and CCTVs will be constructed at Avenue R/65th Street East and Avenue R/70th Street East, and CCTVs will be added to signals at Avenue R/60th Street East and Avenue R/Rockie Lane.

For Avenue S, fiber interconnect will be extended from 55th Street East to 60th Street East and a new traffic signal with CCTV surveillance will be constructed at Avenue S/60th Street East.

Public Review Period: The Mitigated Negative Declaration is available for public review and comment pursuant to California Code of Regulations, Title 14, Sections 15072 and 15073 (California Environmental Quality Act). All comments must be submitted in writing to the address below. Please refer to this project by the file/index numbers listed above. If you have no comment, no reply is necessary. The City of Palmdale does not limit public comments to only the circulation period. Comments can be submitted for consideration up until final action is taken by a vote of the approving authority. The review period has

Notice of Intent to Adopt a Mitigated Negative Declaration
PAL-008 – North County ITS Palmdale Extension Project
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not been shortened pursuant to Section 15105 of the California Environmental Quality Act (CEQA) Guidelines. The comment period during which the City will receive comments on the Mitigated Negative Declaration is:

Starting Date: September 10, 2020

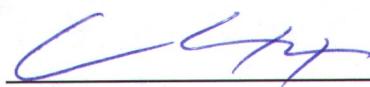
Ending Date: October 1, 2020

Public Hearing: The City of Palmdale Planning Commission is scheduled to make a decision regarding this Mitigated Negative Declaration on October 8, 2020, in the City Council Chambers at 38300 Sierra Highway, Palmdale, California, 93550 at 7:00 p.m.

Responses and Comments: Please send your written comments to:

Benjamin Fiss, Senior Planner
City of Palmdale
Economic and Community Development Department
Planning Division
38250 Sierra Highway
Palmdale, CA 93550
Phone (661) 267-5319 / FAX (661) 267-5233
Email: bfiss@cityofpalmdale.org

Document Availability: Copies of the application, maps, plans, environmental documents, and other pertinent materials related to this application are available for public review at the Planning Division (38250 Sierra Highway) from 7:30 am to 6:00 pm Monday through Thursday. In addition, environmental documents are available for review at the Palmdale City Library (700 East Palmdale Boulevard, Palmdale, CA 93550). Additional information is also available on the City website at www.cityofpalmdale.org.



Carlene Saxton
Acting Planning Manager

9/10/2020

Date

CITY OF PALMDALE

PAL 008-North County ITS Palmdale Extension Project Initial Study/Mitigated Negative Declaration

Prepared for:

CITY OF PALMDALE
DEPARTMENT OF PUBLIC WORKS
38250 SIERRA HIGHWAY, 1ST FLOOR
PALMDALE, CA 93550

Prepared by:



UltraSystems Environmental Inc.
16431 Scientific Way
Irvine, CA 92618-4355

September 2020



PROJECT INFORMATION SHEET

- 1. Project Title** PAL-008 - North County ITS Palmdale Extension Project

- 2. Lead Agency and Address** **City of Palmdale**
Public Works Department
38250 Sierra Highway, 1st Floor
Palmdale, CA 93550

- 3. Contact and Phone Number** Ulises Gonzales
Public Works Project Manager
T: 661/267-5300
E: ugonzalez@cityofpalmdale.org

- 4. Project Applicant** **City of Palmdale**
Public Works Department

- 5. Project Engineer** **Transportation and Energy Solutions, Inc.**
3175 E. Sedona Court, Bldg. E, Suite 6
Ontario, CA 91764
Glen Pedersen, PE, Vice President

- 6. Project Location** City of Palmdale

- 7. Surrounding Land Uses and Setting** The land uses adjacent to the project include residences, commercial development, parks, schools and other urban development.

- 8. Description of Project**

The project proposes to construct fiber optic interconnect, Closed Caption Television (CCTV) surveillance, traffic operations center (TOC) upgrades, and new and upgraded signals within the city. New traffic signal installations will require right of way acquisition to construct ultimate curb returns. The two project areas include portions of Avenue R and Avenue S, east of State Route 14 (Antelope Valley Freeway).

The North County Intelligent Transportation System (ITS) Palmdale Extension project will tie into existing fiber optic interconnect on Avenue R between the TOC and 40th Street East and



extend new fiber west to 70th Street East to replace existing wireless communications at 55th Street East, 60th Street East, and Rockie Lane. In addition, new traffic signals and CCTVs will be constructed at Avenue R/65th Street East and Avenue R/70th Street East, and CCTVs will be added to signals at Avenue R/60th Street East and Avenue R/Rockie Lane.

For Avenue S, fiber interconnect will be extended from 55th Street East to 60th Street East and a new traffic signal with CCTV surveillance will be constructed at Avenue S/60th Street East.

9. Selected Agencies whose Approval is Required

California Department of Transportation
Lahontan Regional Water Quality Control Board

10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code § 21080.3.1? If so, has consultation begun?

Letters were sent by the City of Palmdale Public Works Department (the Lead Agency) to local Native American tribes asking if they wished to participate in AB 52 consultation concerning the PAL-008 project in the City of Palmdale. The letters were sent on October 15, 2019. Two tribes responded and their comments have been incorporated into this document.

11. Other Public Agencies whose Approval is Required

City of Palmdale Public Works Department
County of Los Angeles Fire Department



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Appendix F Noise Study



COMMON ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Term
ADT	average daily traffic
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
ARB	Air Resources Board
AVAQMD	Antelope Valley Air Quality Management District
AVTA	Antelope Valley Transit Authority
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CALFIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAOs	Cleanup and Abatement Orders
CBC	California Building Code
CCR	California Code of Regulations
CCTV	Closed-circuit television
CDFW	California Department of Fish and Wildlife
CDOs	Cease and Desist Orders
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CH ₄	methane
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Plan
City	City of Palmdale
CIWMP	Countywide Integrated Waste Management Plan
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalent
CRPR	California Rare Plant Rank
dB	decibel
dBA	A-weighted decibel scale



Acronym/Abbreviation	Term
DEH	Department of Environmental Health
DOC	California Department of Conservation
DOGGR	California Department of Conservation Division of Oil, Gas and Geothermal Resources
DOSH	California Division of Safety and Health
DTSC	Department of Toxic Substances Control
EI	Expansion Index
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Area
FHSZ	Fire Hazard Severity Zones
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FRAP	Fire Resource and Assessment Program
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	Geographic Information System
GWP	global warming potential
H ₂ S	hydrogen sulfide
HDD	horizontal directional drilling
HSC	Health and Safety Code
HUD	US Department of Housing and Urban Development
Hz	hertz
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
ITS	Intelligent Transportation System
L ₉₀	noise level that is exceeded 90 percent of the time at a given location
LACFD	Los Angeles County Fire Department
L _{dn}	day-night average noise
L _{eq}	equivalent noise level
L _{max}	root mean square (RMS) maximum noise level during the measurement interval
LOS	level of service
LRA	Local Responsibility Area
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
Metro	Los Angeles County Metropolitan Transportation Authority
MLD	Most Likely Descendent
MM	Mitigation Measure



Acronym/Abbreviation	Term
MND	Mitigated Negative Declaration
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MRE	Mineral Resource Extraction
MSL	mean sea level
MTCO _{2e}	metric tons of carbon dioxide equivalent
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
ND	Negative Declaration
NO	nitric oxide
NO ₂	nitrogen dioxide
NO _x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination
O ₃	ozone
OSHA	Occupational Health and Safety
Pb	Lead
PEAP	Palmdale Energy Action Plan
PM	particulate matter
PM ₁₀	respirable particulates
PM _{2.5}	fine particulate matter
PMC	Palmdale Municipal Code
PPV	peak particle velocity
PRC	Public Resources Code
Project	North County ITS Extension Project
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
RMS	root mean square
ROW	Right of Way
RPZ	Runway Protection Zone
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SEAs	Significant Ecological Areas
SERAs	Sensitive Environmental Resource Areas
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act



❖ ACRONYMS AND ABBREVIATIONS ❖

Acronym/Abbreviation	Term
SO ₂	sulfur dioxide
SO _x	sulfur oxide
SRA	State Responsibility Area
SRAs	source receptor areas
SSC	CDFW Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TOC	Traffic Operations Center
TCR	Tribal Cultural Resources
UBC	Uniform Building Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VdB	vibration decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VOC	volatile organic compound
WOUS	Waters of the United States
§	Section
°F	degrees Fahrenheit



1.0 INTRODUCTION

1.1 Proposed Project

The proposed project would be a project in a series of projects to construct fiber optic interconnect, closed-circuit television (CCTV) surveillance, traffic operations center (TOC) upgrades, and new/upgraded signals in the city of Palmdale.

It is anticipated that the new traffic signal installations would require right of way acquisition (to construct ultimate curb returns) and environmental clearance. Topographic survey, bucket truck video surveys and potholing would also be conducted as needed during the design phase.

1.1.1 Existing Conditions

The project areas include portions of Avenue R and Avenue S in the southeast area of the city of Palmdale, east of State Route 14 (Antelope Valley Freeway) and south of Palmdale Regional Airport.

The Avenue R area extends eastward between 40th Street East and 70th Street East. Avenue R is a fully improved east/west surface street with sidewalks and streetlights. Avenue R comprises four primary traffic lanes (two each eastbound and westbound) plus a center turning lane. Avenue R runs through a mix of existing single family detached residential neighborhoods for most of the project area, including a commercial area (neighborhood and community-level shopping centers in all quadrants at the intersection of 47th Street East and Avenue R), and a number of vacant undeveloped parcels, primarily to the east of 55th Street East. Domenic Massari Park, which includes a playground, basketball courts, soccer field and tennis courts, is located in the southeast quadrant of the intersection of Avenue R and 55th Street East.

The Avenue S area runs between 55th Street East and 60th Street East, an area that is developed with a series of existing single-family detached subdivisions as well as the campus of Quail Valley Elementary School, located in the northwest quadrant of the intersection of East Avenue S and 60th Street East. Avenue S is a fully improved four lane surface street with sidewalks, underground utilities and streetlights through the project area.

1.1.2 Planned Construction Activities

The North County Intelligent Transportation System (ITS) Extension project would include the following:

- Tie into the existing fiber optic interconnect on Avenue R between the existing TOC and 40th Street East and extend new fiber west to 70th Street East to replace existing wireless communications at 55th Street East, 60th Street East, and Rockie Lane.



- new traffic signals/CCTVs would be constructed at Avenue R/65th Street East and Avenue R/70th Street East, and CCTVs would be added to signals at Avenue R/60th Street East and Avenue R/Rockie Lane.
- For Avenue S, fiber interconnect added by the Phase II/III project would be extended from 55th Street East to 60th Street East and a new traffic signal with CCTV surveillance would be constructed at Avenue S/60th Street East.
- Intersections Avenue R/ 65th Street East and Avenue S/ 60th Street East would both widen traffic lanes and install an ultimate curb return.
- Avenue R/ 65th Street East would add a southbound left turn-lane; however, this lane would not require lane widening.
- Avenue R/ 70th Street East would construct a ten-foot shoulder on the east side from south of Avenue R to north of Avenue R, position traffic signal poles behind on east side approximately eight feet behind shoulder or within right-of-way if not enough room, and install barriers to close access to east leg.

1.2 Project Applicant for this Project

City of Palmdale
Public Works Department
38250 Sierra Highway, 1st Floor
Palmdale, CA 93550
Ulises Gonzales
Public Works Project Manager

1.3 Lead Agencies – Environmental Review Implementation

The City of Palmdale is the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and its implementing regulations.¹ The Lead Agency has the principal responsibility for implementing and approving a project that may have a significant effect on the environment.

1.4 CEQA Overview

1.4.1 Purpose of CEQA

All discretionary projects in California are required to undergo environmental review under CEQA. A project is defined in CEQA Guidelines § 15378 as the whole of the action having the potential to result in a direct physical change or a reasonably foreseeable indirect change to the environment and is any of the following:

¹ Public Resources Code §§ 21000 - 21177 and California Code of Regulations Title 14, Division 6, Chapter 3.



- An activity directly undertaken by any public agency including, but not limited to, public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements.
- An activity undertaken by a person which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

CEQA Guidelines § 15002 lists the basic purposes of CEQA as follows:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

1.4.2 Authority to Mitigate under CEQA

CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible. Under CEQA Guidelines § 15041 a Lead Agency for a project has authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the “nexus”² and “rough proportionality”³ standards.

CEQA allows a Lead Agency to approve a project even though the project would cause a significant effect on the environment if the agency makes a fully informed and publicly disclosed decision that there is no feasible way to lessen or avoid the significant effect. In such cases, the Lead Agency must specifically identify expected benefits and other overriding considerations from the project that outweigh the policy of reducing or avoiding significant environmental impacts of the project.

2 A nexus (i.e., connection) must be established between the mitigation measure and a legitimate governmental interest.

3 The mitigation measure must be “roughly proportional” to the impacts of the project.



1.5 Purpose of Initial Study

The CEQA process begins with a public agency making a determination as to whether the project is subject to CEQA at all. If the project is exempt, the process does not need to proceed any farther. If the project is not exempt, the Lead Agency takes the second step and conducts an Initial Study to determine whether the project may have a significant effect on the environment.

The purposes of an Initial Study as listed in § 15063(c) of the CEQA Guidelines are to:

- Provide the Lead Agency with information necessary to decide if an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND) should be prepared.
- Enable a Lead Agency to modify a project to mitigate adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a ND or MND.
- Assist in the preparation of an EIR, if required, by focusing the EIR on adverse effects determined to be significant, identifying the adverse effects determined not to be significant, explaining the reasons for determining that potentially significant adverse effects would not be significant, and identifying whether a program EIR, or other process, can be used to analyze adverse environmental effects of the project.
- Facilitate an environmental assessment early during project design.
- Provide documentation in the ND or MND that a project would not have a significant effect on the environment.
- Eliminate unnecessary EIRs.
- Determine if a previously prepared EIR could be used for the project.

In cases where no potentially significant impacts are identified, the Lead Agency may issue a ND, and no mitigation measures would be needed. Where potentially significant impacts are identified, the Lead Agency may determine that mitigation measures would adequately reduce these impacts to less than significant levels. The Lead Agency would then prepare a MND for the project. If the Lead Agency determines that individual or cumulative effects of the project would cause a significant adverse environmental effect that cannot be mitigated to less than significant levels, then the Lead Agency would require an EIR to further analyze these impacts.

1.6 Review and Comment by Other Agencies

Other public agencies are provided the opportunity to review and comment on the Initial Study/Mitigated Negative Declaration (IS/MND). Each of these agencies is described briefly below.



- A Responsible Agency (14 CCR § 15381) is a public agency, other than the Lead Agency, that has discretionary approval power over the project, such as permit issuance or plan approval authority.
- A Trustee Agency⁴ (14 CCR § 15386) is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California.
- Agencies with Jurisdiction by Law (14 CCR § 15366) are any public agencies who have authority: (1) to grant a permit or other entitlement for use; (2) to provide funding for the project in question; or (3) to exercise authority over resources which may be affected by the project. Furthermore, a city or county will have jurisdiction by law with respect to a project when the city or county having primary jurisdiction over the area involved is: (1) the site of the project; (2) the area which the major environmental effects will occur; and/or (3) the area in which reside those citizens most directly concerned by any such environmental effects.

1.7 Organization of the Initial Study/Mitigated Negative Declaration

This document is organized to satisfy CEQA Guidelines § 15063(d), and includes the following sections:

- **Section 1.0 - Introduction**, which identifies the purpose and scope of the IS/MND.
- **Section 2.0 - Environmental Setting**, which describes location, existing site conditions, land uses, zoning designations, topography, and vegetation associated with the project site and surroundings.
- **Section 3.0 - Project Description**, which provides an overview of the project objectives, a description of the proposed development, project construction activities, and discretionary actions for the approval of the project.
- **Section 4.0 - Environmental Checklist**, which presents checklist responses for each resource topic to identify and assess impacts associated with the proposed project, and proposes mitigation measures, where needed, to render potential environmental impacts less than significant, where feasible.
- **Section 5.0 - References**, which includes a list of documents cited in the IS/MND.
- **Section 6.0 - List of Preparers**, which identifies the primary authors and technical experts that prepared the Initial Study.
- **Section 7.0 - Mitigation Monitoring and Reporting Program (MMRP)**, which ensures implementation of the measures being imposed to mitigate or avoid the

4 The four Trustee Agencies in California listed in CEQA Guidelines § 15386 are California Department of Fish and Wildlife, State Lands Commission, State Department of Parks and Recreation, and University of California.



significant adverse environmental impacts identified through the use of monitoring and reporting.

Technical studies and other documents, which include supporting information or analyses used to prepare the IS/MND, are included in the following appendices:

- Appendix A – Project Plans and Drawings
- Appendix B – Air Quality and Greenhouse Gas Emissions Data and Calculations
- Appendix C – Phase 1 Cultural Resources Study
- Appendix D – Paleontological Records Search
- Appendix E – Phase 1 Environmental Site Assessment
- Appendix F – Noise Study

1.8 Findings from the IS/MND

1.8.1 No Impact or Impacts Considered Less than Significant

Based on IS/MND findings, the project would have no impact or a less than significant impact on the following environmental categories listed from Appendix G of the CEQA Guidelines.

Aesthetics
Agriculture and Forestry Resources
Air Quality
Energy
Greenhouse Gas Emissions
Hazards and Hazardous Materials
Hydrology and Water Quality
Land Use and Planning
Mineral Resources
Population and Housing
Public Services
Recreation
Transportation and Traffic
Utilities and Service Systems
Wildfire

1.8.2 Impacts Considered Less than Significant with Mitigation Measures

Based on IS/MND findings, the project would have a less than significant impact on the following environmental categories listed in Appendix G of the CEQA Guidelines when proposed mitigation measures are adopted.



Biological Resources
Cultural Resources
Geology and Soils
Noise
Tribal Cultural Resources

1.9 Certification

Prior to project approval, Responsible Agencies, Trustee Agencies, Agencies with Jurisdiction by Law, and the public are provided 30 days to review and comment on the IS/MND. Approval of the proposed project by the Lead Agency is contingent on adoption of the IS/MND after considering agency and public comments. By adopting the IS/MND, the Lead Agency (City) certifies that the analyses provided in the IS/MND were reviewed and considered by the City Planning Commission, and the IS/MND complies with CEQA.



2.0 ENVIRONMENTAL SETTING

2.1 Project Location

The project is located in the southeast area of the city of Palmdale, east of State Route 14 (Antelope Valley Freeway), including portions of Avenue R East and Avenue S East. Avenues R and S are east/west surface streets within the incorporated city (refer to **Figure 2.1-1**, Regional Location).

The site location is shown in **Figure 2.1-2**, Project Location.

2.2 Project Setting

The City of Palmdale is in the Antelope Valley in the western end of the Mojave Desert, which is characterized by isolated mountain ranges surrounded by desert plains. The Antelope Valley is bounded by the San Gabriel Mountains on the southwest, the Tehachapi Mountains on the northwest, and various ranges of mountains and hills to the east. The climate in Palmdale is characterized by hot summers and cool winters; average winter high and low temperatures are approximately 59.8°F and 33.6°F, respectively and average summer (June, July, and August) high and low temperatures are approximately 94.9°F and 62.4°F, respectively. Average annual rainfall measured 7.61 inches (WRCC, 2019).

The project site is in a mostly built-out urbanized setting including scattered areas of open space. The project site consists of portions of two existing surface streets, Avenue R East and Avenue S East. The Avenue R site, extending from 40th Street East to 70th Street East, is approximately 16,115 feet (3.05 miles) in length. The Avenue S site, extending from 55th Street East to 60th Street East, is approximately 2,684 feet (0.5 miles) long.

The project consists of multiple portions from Avenue R East and Avenue S East (Assessor's Parcel Number [APN] 3024-009-048, -068, -69, -70). Surrounding uses around the site include single-family residential uses, located to the north, south, west and east of Avenue R and Avenue S. Multi-family residential uses in portions along Avenue R to the south and neighborhood commercial uses in portions along Avenue R to the north. Large open spaces are also located in portions along Avenue R both to the north and the south.

2.2.1 Land Use and Zoning

General Plan land use designations and zoning, and existing uses within the immediate vicinity of the project site are listed below, and depicted in **Figure 2.2-1**, General Plan Land Use Designation, and **Figure 2.2-2**, Zoning.

Surrounding Uses:

General Plan Land Use Designation

Avenue R East



of both standards without the influence of this transported air pollution from upwind regions.

2.2.4 Biology

The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) search of the project area resulted in known occurrences of five sensitive species within a two-mile radius of the project site (CDFW, 2018). These species include: Mohave ground squirrel (State-listed as Threatened), Burrowing owl (CDFW Species of Special Concern [SSC]), Coast horned lizard (CDFW SSC), Northern California legless lizard (CDFW SSC) and Sagebrush loeflingia (CRPR: 2B.2)⁵

The project site is located in a highly-urbanized setting which provides low habitat value for special-status plant and wildlife species. The project site primarily consists of existing paved roadway with sidewalks and impervious surfaces that lack suitable soils, biological resources, and physical features to support any candidate, sensitive, or special-status plant and animal species.

2.2.5 Geology and Soils

The Antelope Valley is part of the Mojave structural block, an elevated desert lying between 2,300 and 3,500 feet above mean sea level (msl). The Tehachapi Mountain Range is on the north and northwest and the San Gabriel, Sierra Pelonas, and the Liebre Mountains are south and southwest of the Antelope Valley (Google Earth, 2020).

The project site is within a seismically active region of California under influence of several fault systems. The San Andreas Fault Zone is the closest active fault, approximately 1.8 miles southwest of the project site. The site is not within a liquefaction zone and or in an area mapped for potentially expansive soils.

2.2.6 Public Services

The City is served by a full range of public services and utilities. The Los Angeles County Fire Department (LACFD) and the Palmdale Sheriff's Department provide fire protection, and law enforcement and police services. The City's Department of Recreation and Culture operate, maintain, and provide recreation and open space amenities through a variety of public parks and open space areas. The Palmdale School District and Antelope Valley Union High School District provides public educational facilities in the City.

2.2.7 Utilities and Service Systems

The Los Angeles County agencies and private agencies provide service, main lines, reservoirs and treatment plants for water and sewer services. Sewer service is provided in the city through Los Angeles County Sanitation Districts. The City receives domestic water service from the Los Angeles County Waterworks Districts and a number of private

5 California Rare Plant Rank (CRPR) 2B.2 = plants rare, threatened, or endangered in California, but more common elsewhere. Fairly endangered in California (20-80 percent occurrences threatened).



❖ SECTION 2.0 - ENVIRONMENTAL SETTING ❖

agencies. Southern California Edison (SCE) provides electrical power in the City through a grid of transmission lines and distribution facilities (City of Palmdale Utilities, 2020). The City contracts with Waste Management to collect and dispose of solid waste generated within the City, which is collected and transported to the Antelope Valley Landfill.



**Figure 2.1-1
REGIONAL LOCATION**



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: J:\Projects\6060_Palmdale_ITS_Phase_V\MXD\6060_Palmdale_IV_2_0_Regional_Location_2018_12_03.mxd
 Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC,
 © OpenStreetMap contributors, and the GIS User Community, Cal Fire, 2007; City of Downey, 2018; UltraSystems Environmental, Inc., 2018

December 3, 2018

North County ITS Palmdale Extension Project
Regional Location

Legend

- Project Boundary
- County Boundary

Scale 1:633,600

N

0 5 10 Miles

0 5 10 Kilometers



**Figure 2.1-2
PROJECT LOCATION**



Path: J:\Projects\6060_Palmdale_ITS_Phase_IV\MXD\6060_Palmdale_IV_2_0_Project_Location_2018_05_07.mxd
 May 7, 2018
 Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Transportation & Energy Solutions, Inc., 2018, UltraSystems Environmental, Inc., 2018

Scale 1:31,680



0 0.25 0.5 Miles

0 0.25 0.5 Kilometers

Legend

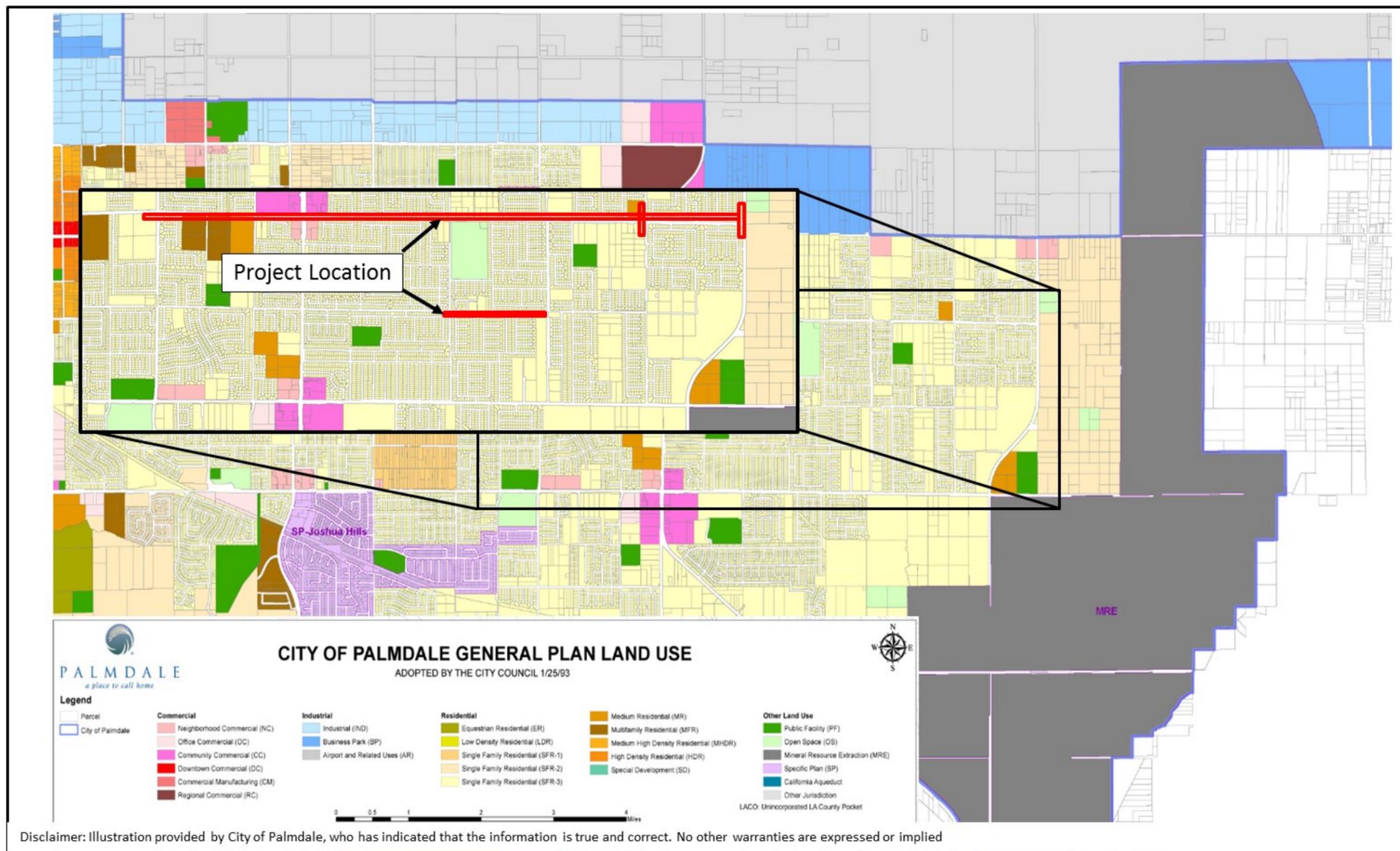
Project Boundary

**North County ITS Palmdale
Extension Project**

Project Location



**Figure 2.2-1
GENERAL PLAN LAND USE DESIGNATION**

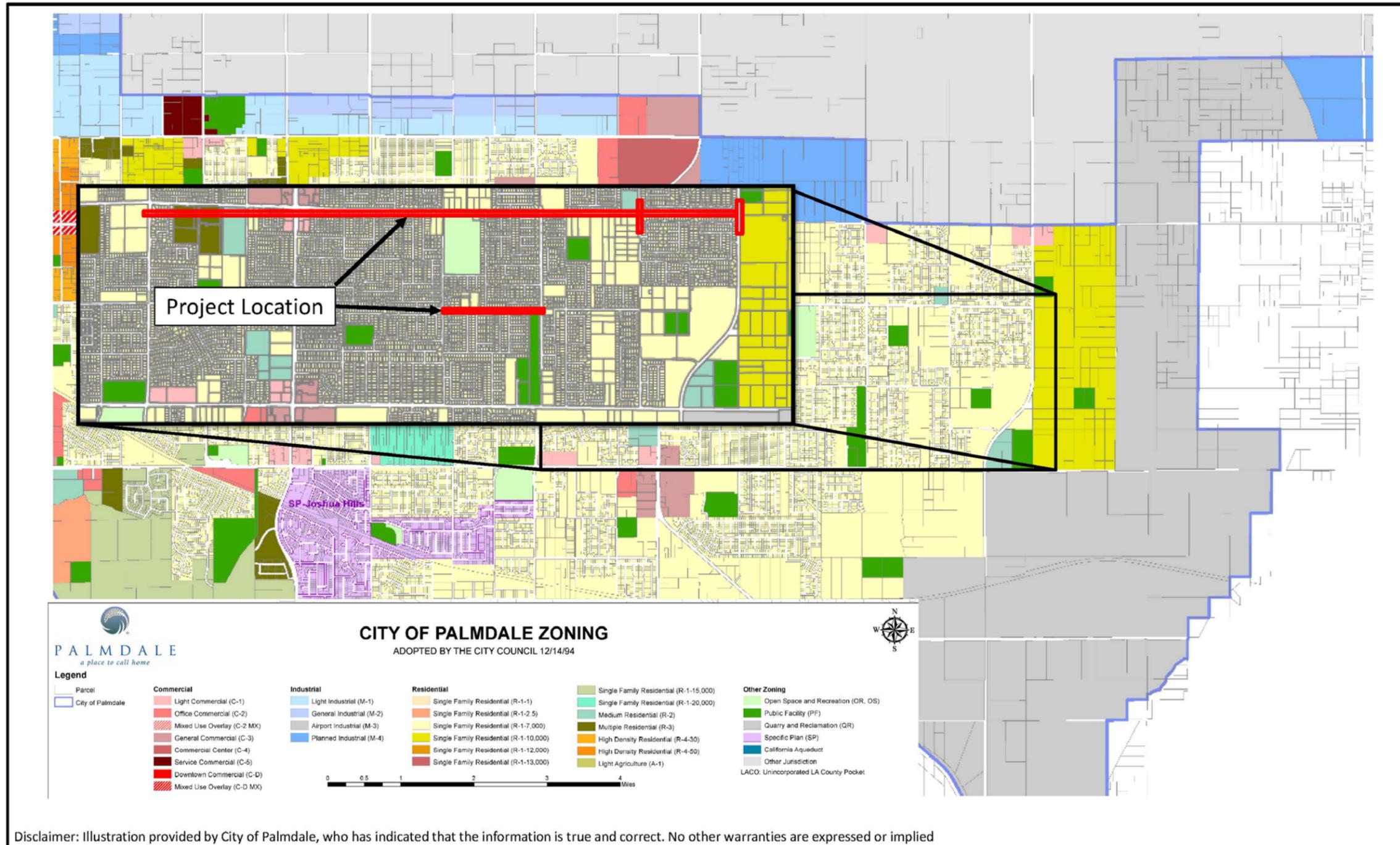


Source: City of Palmdale, 1993/2016



**North County ITS Palmdale
Extension Project**
General Plan Land Use Map

**Figure 2.2-2
ZONING**



**North County ITS Palmdale
Extension Project**
Zoning Map





3.0 PROJECT DESCRIPTION

3.1 Project Background

The City of Palmdale (City) proposes the North County ITS Extension Project (herein referred to as project or proposed project). The project will enable the City to further expand on its capability of monitoring and controlling the operations of all City traffic signals. Any future signal synchronization that can interface with the traffic management center will aid in monitoring and improving traffic flow. The monitoring and control function will expand on the future interjurisdictional data sharing component to allow the implementation of arterial traffic management strategies, such as cooperative efforts in developing timing plans and coordinating responses to incidents.

The project proposes to construct fiber optic interconnect, closed circuit television (CCTV) surveillance, traffic operations center (TOC) upgrades, and new and upgraded signals within two project areas, which include portions of Avenue R and Avenue S, east of State Route 14 (SR 14). New traffic signal installations will require right-of-way acquisition to construct ultimate curb returns.

Traffic counts in the two project areas vary, generally increasing as they get further to the west (nearer to SR 14). On Avenue R, counts in the project area to the east of SR 138 show 23,000 average daily traffic (ADT), while counts to the west of SR 138 show 32,000 ADT. On the relevant portion of Avenue S, ADT was reported at 25,000 per day.

3.2 Project Location

The project is located in Palmdale, California in Los Angeles County as shown in **Figure 3.2-1**, Project Location Map. As shown in the figure, the project includes portions of Avenue R and Avenue S. Specific project elements will be located as follows:

- Extension of Fiber Optic Lines:
 - Avenue R, between 40th Street East to 70th Street East
 - Avenue S, between 55th Street East to 60th Street East
- New Traffic Signals
 - Avenue R/65th Street East
 - Avenue R/70th Street East
 - Avenue S/60th Street East
- CCTVs
 - Avenue R/60th Street East
 - Avenue R/Rockie Lane
 - Avenue R/65th Street East
 - Avenue R/70th Street East
 - Avenue S/60th Street East



3.3 Proposed Project

The project involves the expansion of ITS infrastructure in order to increase current and future traffic mobility by relieving traffic congestion on Avenue R and Avenue S. The expansion of the interconnected system is expected to improved traffic signal coordination, shorten travel delays and result in lower air pollutant emissions along the project corridors. The project will extend the existing ITS infrastructure, which will provide coordination for nine existing traffic signals, installation of three traffic signals and installation of CCTVs. The extension of the existing fiber optic system will assist the interconnection of existing and new traffic signals to the City's Advance Traffic Management System.

Following are specific actions that will be undertaken as part of the North County ITS Extension Project. A majority of the construction activity will be within rights-of-way of existing public streets. A few parcels will need to be acquired to expand existing rights-of-way. Refer to **Appendix A** of this document, which provides plans for the following improvements:

Extension of Fiber Optic Lines

- Tie into existing fiber optic interconnect on Avenue R between the TOC and 40th Street East and extend new fiber west to 70th Street East to replace existing wireless communications at 55th Street East, 60th Street East, and Rockie Lane.
- Extend fiber interconnect on Avenue S from 55th Street East to 60th Street East.

Avenue R/60th Street East Improvements

- Install CCTV to existing signal.

Avenue R/Rockie Lane Improvements

- Install CCTV to existing signal.

Avenue R/65th Street East Improvements

- Construct new traffic signal and CCTV.
- Widen eastbound right turn pocket to 250 feet with a 120-foot entry transition.
- Construct southwest 35-foot ultimate curb return with curb, gutter, ramp, and pavement transitions.
- Widen west side of south leg to add northbound left-turn lane.
- Add southbound left-turn lane (no widening required).



- Acquire right-of-way for APN# 3024-009-048, -068, -69, and -70.

Avenue R/70th Street East Improvements

- Construct new traffic signal and CCTV.
- Construct ten-foot shoulder on east side from south of Avenue R to north of Avenue R.
- Position traffic signal poles on east side approximately eight feet behind shoulder or within right-of-way if not enough room.
- Add barriers to close access to east leg.
- Acquire right-of-way for east side of 70th Street East.

Avenue S/60th Street East (SW, SE, and NE Corners)

- Construct new traffic signal and CCTV.
- Construct ultimate curb return for northeast corner with short transitions.
- Widen the north side of Avenue S between 60th Street East and the north leg; remove unneeded pavement from north side.
- Widen/improve south side of Avenue S to include an eastbound right-turn lane and connect existing sidewalk to new curb return.
- Acquire right of way for APN# 3024-010-037 and -038, and 3051-013-052.

3.4 Project Construction

The project construction start date is uncertain because of the need to obtain right-of-way at several locations.⁶ Anticipating a lengthy right-of-way acquisition process, it is assumed that work would begin in early spring, 2021 and would last approximately four months.

The project would be completed in two phases, which are described briefly below.

- Phase 1: design project; identify conflicting underground utilities; acquire expanded rights-of-way and environmental clearances; and obtain plan approval.
- Phase 2: select contractors; mark underground utilities; relocate conflicting utilities; excavate trenches; install fiber optic lines, traffic signals and CCTV; backfill trenches; restore landscapes and street pavement; and clean construction site.

6 Email from Glen Pedersen, TES, to Michael Rogozen, UltraSystems Environmental Inc., Irvine, CA. October 14, 2010.



❖ SECTION 3.0 - PROJECT DESCRIPTION ❖

Construction methods, equipment, and procedures would be typical for public works ITS infrastructure improvement projects. The number of construction workers will vary throughout construction. The type of construction equipment that would be utilized during construction may include cranes, air compressors, backhoe, forklift, bore rig, mechanical pusher/puller, paver, roller, concrete mixer, concrete saw, jackhammer, auger, generator sets, welder and other power tools. Soil excavated from trenches would be replaced as engineered compacted backfill after fiber optic line and new traffic signal installation. Construction will occur between 8:00 a.m. and 4:00 p.m. Monday through Friday, excluding federal holidays. The primary project staging area will be located on existing street rights-of-way along Avenue R and Avenue S. When necessary, existing roadways would be used as staging areas, as needed. A traffic control plan will be prepared to accommodate the work areas.

3.5 Discretionary Actions

Following Lead Agency approval of the IS/MND (see **Section 1.0**), the following permits and plan approvals would be required before construction.

Agency	Permit or Approval
Agency	Approval of expanded rights-of-way
California Department of Transportation (Caltrans)	E76 – for each phase of the project, and Right of Way Certification
Lahontan Regional Water Quality Control Board (LARWQCB)	Issuance of a General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (National Pollution Discharge Elimination System [NPDES] permit)
SoCal Gas	Plan review for potential utility conflict/relocation
Edison	Plan review for potential utility conflict/relocation
Palmdale Water District	Plan review for potential utility conflict/relocation



4.0 ENVIRONMENTAL CHECKLIST

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” or as a “Potentially Significant Unless Mitigation Incorporated,” as indicated by the checklist on the following pages.

- | | | |
|---|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Air Quality | <input type="checkbox"/> Hydrology and Water Quality | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities and Service Systems |
| <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Population and Housing | <input checked="" type="checkbox"/> Mandatory Findings of Significance |
| <input checked="" type="checkbox"/> Geology and Soils | <input type="checkbox"/> Public Services | |



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.
- 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.

Signature

Date

Printed Name

City of Palmdale

Evaluation of Environmental Impacts

A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.



❖ SECTION 4.0 - ENVIRONMENTAL CHECKLIST ❖

Once the lead agency has determined that a particular physical impact may occur then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

“Negative Declaration: Less than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less than Significant Impact.” The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to less than significant level.

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an affect has been adequately analyzed in an earlier EIR or negative declaration. (See Section 15063(c)(3)(D) of the CEQA Guidelines. In this case, a brief discussion should identify the following:

- (a) Earlier Analyses Used. Identify and state where the earlier analysis available for review.
- (b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
- (c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list should be attached and other sources used or individuals contacted should be cited in the discussion.

Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.



❖ SECTION 4.0 - ENVIRONMENTAL CHECKLIST ❖

The explanation of each issue should identify:

- (a) The significance criteria or threshold, if any, used to evaluate each question; and
- (b) The mitigation measure identified, if any, to reduce the impact to less than significant.



4.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

A “visual environment” includes the built environment (development patterns, buildings, parking areas, and circulation elements) and natural environment (such as hills, vegetation, rock outcroppings, drainage pathways, and soils) features. Visual quality, viewer groups and sensitivity, duration, and visual resources characterize views. Visual quality refers to the general aesthetic quality of a view, such as vividness, intactness, and unity. Viewer groups identify who is most likely to experience the view. High-sensitivity land uses include residences, schools, playgrounds, religious institutions, and passive outdoor spaces such as parks, playgrounds, and recreation areas. Duration of a view is the amount of time that a particular view can be seen by a specific viewer group. Visual resources refer to unique views, and views identified in local plans, from scenic highways, or of specific unique structures or landscape features.

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact

Scenic vistas generally include extensive panoramic views of natural features, unusual terrain, or unique urban or historic features, for which the field of view can be wide and extend into the distance, and focal views that focus on a particular object, scene or feature



of interest. The City of Palmdale General Plan Environmental Resources Element identifies the City's scenic viewsheds or "scenic backdrops" as the significant ridgelines of the San Gabriels, the Sierra Pelona and the Ritter and Portal Ridges that form the City's skyline views (City of Palmdale General Plan, 1993b). Distant views of ridgelines to the south and west are partially available from the project roadways.

The proposed project involves changes to existing ITS infrastructure, including the addition of new traffic signals, CCTV, and improvements to existing streets. These changes would not be of a nature or scale to significantly impact existing street views or other scenic vistas in the surrounding area because the project is not proposing any buildings or other large structures that could impact views of scenic vistas. Therefore, the project would have a less than significant impact on scenic vistas.

- b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

No Impact

The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. The project site does not include scenic resources such as trees, rock outcroppings, or historic buildings.

The California Department of Transportation (Caltrans) provides information regarding officially designated or eligible state scenic highways, designated as part of the California Scenic Highway and Historic Parkway Program. There are currently no officially designated State Scenic Highways that traverse the City of Palmdale (Caltrans 2019). The City has designated eight roadways as City scenic highways: Barrel Springs Road; Tierra Subida Avenue; Sierra Highway, South of Avenue S; Elizabeth Lake Road; Pearblossom Highway; Bouquet Canyon Road; Godde Hill Road; and Antelope Valley Freeway, south of Rayburn Road. The proposed project does not involve any of these roadways. The closest City scenic highways, Barrel Springs Road and Pearblossom Highway, would not be visible from the project site due to intervening structures and topography.

The project would be consistent with the City's General Plan (1993) policies which impose development guidelines and standards to protect scenic viewsheds both to and from the City. Therefore, no impact would occur.

- c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the**



project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact

During project construction, there would be elements on the project site that are not compatible with the project vicinity. These features may include construction equipment (e.g., small cranes, pickup trucks), stockpiled materials, and construction-area barriers and fencing. Construction elements would be inconsistent with the visual character of the project vicinity. However, construction activities would be short-term and would be removed following construction, therefore, they would result in a temporary and less than significant visual impact.

The proposed project involves changes to existing ITS infrastructure, including the addition of new traffic signals, CCTV, and improvements to existing streets. These changes would result in improvements similar to existing street infrastructure in the city and would not be inconsistent with existing conditions. Additionally, the project would be required to undergo Site Plan Review by the City. Therefore, the proposed project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings.

- d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

Less Than Significant Impact

The majority of the proposed project would not increase lighting in the area, with the exception of the three new traffic signals. While the new traffic signals would create new sources of light, this type of lighting would be similar to the existing City traffic signals and would not be expected to result in light spillage onto adjacent properties.

Glare is caused by light reflections from pavement, vehicles, and building materials, such as reflective glass and polished surfaces. During daylight hours, the amount of glare depends on the intensity and direction of sunlight. Glare can create hazards to motorists and nuisances to bicyclists, pedestrians, and other sensitive viewers. Implementation of the project would not include reflective surfaces such as windows or other glare-creating finishes. Paving associated with the proposed project will be similar to existing conditions and would not create a new source of glare.

The project would be required to adhere to the applicable City's design requirements as they relate to light and glare. With adherence to applicable design requirements, and following the City's design review process, potential light and glare impacts resulting from project implementation would be less than significant.



4.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

a) Would the project 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?

No Impact

The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP [see below]) in 1982 to identify critical agricultural lands and track the conversion of these lands to other uses. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The project areas and the surrounding land are designated by the FMMP as “Urban and Built-Up Land” and “Other Land” (California Important Farmland Finder; California Department of Conservation, 2016). The former category includes land that is occupied by residential, industrial, commercial or other



❖ SECTION 4.2 - AGRICULTURE AND FORESTRY RESOURCES ❖

facilities conducive to an urban environment. The latter category includes land that is low density rural development, brush, timber, wetlands, and riparian areas not suitable for agricultural uses or vacant and non-agricultural land surrounded on all sides by urban development.

The infrastructure project is within the City of Palmdale street right-of-way (ROW), except for two areas where new traffic signal installations would require ROW acquisition to construct ultimate curb returns. The project site is not designated as farmland. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. No impact would occur.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

According to the 2014 State of California Williamson Act Contract Land Map, the project areas are identified as “Urban and Built-Up Land” and “Non-Enrolled Land,” which do not contain land enrolled in a Williamson Act contract.⁷ The project areas’ surrounding zoning is comprised of Single-Family Residential and Public Facilities. Additionally, no agricultural uses exist within the project sites or surrounding areas. Therefore, the project would not impact agricultural uses or Williamson Act contracts. No impact would occur.

c) Would the project (c) conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

No Impact

The project is located in an urbanized setting within the City of Palmdale street right of way. The project areas’ surrounding zoning designations are “R-1 – Single Family Residential,” “R-2 – Medium Residential,” and “PF – Public Facilities.” These designations do not support the definitions provided by PRC § 42526 for timberland, PRC § 12220(g) for forestland, or California Government Code § 51104(g) for timberland zoned for production. PRC § 12220(g) defines forest land as “land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” Additionally, since the project is located in an urban setting, project-related changes would not result in conversion of farm or forest land to non-agricultural or non-forest uses. Therefore, no impacts related to agricultural and forest land resources would occur.

⁷ [ftp://ftp.consrv.ca.gov/pub/Dlrp/WA/2014%20Statewide%20Map/WA_2014_11x17.pdf/](http://ftp.consrv.ca.gov/pub/Dlrp/WA/2014%20Statewide%20Map/WA_2014_11x17.pdf/). Accessed April 27, 2018.



- d) **Would the project result in the loss of forest land or conversion of forest land to non-forest use?**

No Impact

The proposed project includes the construction of fiber optic infrastructure, remote CCTV surveillance, TOC upgrades, traffic signal upgrades, and new traffic signals. The project areas are within existing City street ROW, which is not designated as forest or farmland. Implementation of the project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impacts would occur.

- e) **Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

No Impact

The proposed project is for the construction of fiber optic infrastructure, remote CCTV surveillance, TOC upgrades, traffic signal upgrades, and new traffic signals. The project areas are within existing City street ROW, which is not designated, as forest or farmland. Therefore, implementation of the proposed project would not result in the conversion of farmland to non-agricultural use or the conversion of forest land to non-forest use.



4.3 Air Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

4.3.1 Pollutants of Concern

Criteria pollutants are air pollutants for which acceptable levels of exposure can be determined and an ambient air quality standard has been established by the U.S. Environmental Protection Agency (USEPA) and/or the California Air Resources Board (ARB). The criteria air pollutants of concern are nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂), lead (Pb), and ozone (O₃), and their precursors. Since the proposed project would not generate appreciable SO₂ or Pb emissions,⁸ it is not necessary for the analysis to include those two pollutants. **Table 4.3-1** shows the area designation status of the Mojave Desert Air Basin (MDAB) for each criteria pollutant for both the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Presented below is a description of the air pollutants of concern and their known health effects.

⁸ Sulfur dioxide emissions will be below 0.005 pound per day during construction and operations.



**Table 4.3-1
FEDERAL AND STATE ATTAINMENT STATUS**

Pollutants	Federal Classification	State Classification
Ozone (O ₃)	Nonattainment (Severe-15)	Nonattainment
Particulate Matter (PM ₁₀)	Unclassified	Nonattainment
Fine Particulate Matter (PM _{2.5})	Unclassifiable/Attainment	Unclassified
Carbon Monoxide (CO)	Unclassifiable/Attainment	Attainment
Nitrogen Dioxide (NO ₂)	Unclassifiable/Attainment	Attainment
Sulfur Dioxide (SO ₂)	Unclassifiable/Attainment	Attainment
Lead	Unclassifiable/Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide (H ₂ S)		Unclassified
Visibility Reducing Particles		Unclassified

Source: ARB, 2019b, USEPA, 2019

Nitrogen oxides (NO_x) serve as integral participants in the process of photochemical smog production and are precursors for certain particulate compounds that are formed in the atmosphere. The two major forms of NO_x are nitric oxide (NO) and NO₂. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO₂ is a reddish-brown pungent gas formed by the combination of NO and oxygen. NO₂ acts as an acute respiratory irritant and eye irritant and increases susceptibility to respiratory pathogens. A third form of NO_x, nitrous oxide (N₂O), is a greenhouse gas (GHG), and is discussed in **Section 4.8**.

Carbon monoxide (CO) is a colorless, odorless non-reactive pollutant produced by incomplete combustion of carbon substances (e.g., gasoline or diesel fuel). The primary adverse health effect associated with CO is its binding with hemoglobin in red blood cells, which decreases the ability of these cells to transport oxygen throughout the body. Prolonged exposure can cause headaches, drowsiness, or loss of equilibrium; high concentrations are lethal.

Particulate matter (PM) consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulate matter are now regulated. Respirable particles, or PM₁₀, include that portion of the particulate matter with an aerodynamic diameter of 10 micrometers (i.e., 10 one-millionths of a meter or 0.0004 inch) or less. Fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 micrometers (i.e., 2.5 one-millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on the arid landscape also contributes substantially to the local particulate loading. Fossil fuel combustion accounts for a significant portion of PM_{2.5}. In addition, particulate matter forms in the atmosphere through reactions of NO_x and other compounds (such as ammonia) to form inorganic nitrates and sulfates. Both



PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in those people who are naturally sensitive or susceptible to breathing problems.

Reactive organic gases (ROG) are compounds comprised primarily of atoms of hydrogen and carbon that have high photochemical reactivity. The major source of ROG is the incomplete combustion of fossil fuels in internal combustion engines. Other sources of ROG include the evaporative emissions associated with the use of paints and solvents, the application of asphalt paving and the use of household consumer products. Some ROG species are listed toxic air contaminants, which have been shown to cause adverse health effects; however, most adverse effects on human health are not caused directly by ROG, but rather by reactions of ROG to form other criteria pollutants such as ozone. ROG are also transformed into organic aerosols in the atmosphere, contributing to higher levels of fine particulate matter and lower visibility. The term “ROG” is used by the ARB for air quality analysis and is defined essentially the same as the federal term “volatile organic compound” (VOC).⁹

Ozone is a secondary pollutant produced through a series of photochemical reactions involving ROG and NO_x. Ozone creation requires ROG and NO_x to be available for approximately three hours in a stable atmosphere with strong sunlight. Because of the long reaction time, peak ozone concentrations frequently occur downwind of the sites where the precursor pollutants are emitted. Thus, ozone is considered a regional, rather than a local, pollutant. The health effects of ozone include eye and respiratory irritation, reduction of resistance to lung infection and possible aggravation of pulmonary conditions in persons with lung disease. Ozone is also damaging to vegetation and untreated rubber.

4.3.2 Climate/Meteorology

Meteorology is the study of weather and climate. Weather refers to the state of the atmosphere at a given time and place regarding temperature, air pressure, humidity, cloudiness, and precipitation. The term “weather” refers to conditions over short periods; conditions over long periods, generally at least 30 to 50 years, are referred to as climate. Climate, in a narrow sense, is usually defined as the “average weather,” or more rigorously as the statistical description in terms of the mean and variability of relevant quantities over a period ranging from months to thousands or millions of years. These quantities are most commonly surface variables such as temperature, precipitation, and wind.

The project site will be located wholly within Antelope Valley, which is in northern Los Angeles County, California, and the southeast portion of Kern County, California, and constitutes the western tip of the Mojave Desert and the MDAB. The Antelope Valley is situated between the Tehachapi and the San Gabriel Mountains. The distinctive climate of the Antelope Valley is determined by its terrain and geographical location. The

⁹ Emissions of organic gases are typically reported only as aggregate organics, either as VOC or as ROG. These terms are meant to reflect what specific compounds have been included or excluded from the aggregate estimate. Although EPA defines VOC to exclude both methane and ethane, and CARB defines ROG to exclude only methane, in practice it is assumed that VOC and ROG are essentially synonymous.



Antelope Valley is classified "Mediterranean" under the Köppen Climate Classification (Weatherbase, 2019).

The nearest National Weather Service Station to the project site is in Palmdale. At the Palmdale station (WRCC, 2019), the National Climatic Data Center period of record is 1893 through 2012. During the period of record, the average annual rainfall measured 7.61 inches, which occurs mostly during the winter and relatively infrequently during the summer. Monthly precipitation averages approximately 4.34 inches during the winter (December, January, and February), approximately 1.86 inches during the spring (March, April, and May), approximately 1.18 inch during the fall (September, October, and November), and approximately 0.24 inch during the summer (June, July, and August).

The average maximum and minimum monthly temperatures during the period of record were 77.2 and 47.2 degrees Fahrenheit (°F), respectively. Average winter high and low temperatures are approximately 59.8°F and 33.6°F, respectively and average summer (June, July, and August) high and low temperatures are approximately 94.9°F and 62.4°F, respectively (WRCC, 2019).

4.3.3 Local Air Quality

Meteorology acts on the emissions released into the atmosphere to produce pollutant concentrations. These airborne pollutant concentrations are measured throughout California at air quality monitoring sites. The nearest Antelope Valley Air Quality Management District (AVAQMD) monitoring site to the project is in Lancaster on Division Street (ARB, 2019a). This site monitors ozone, NO₂, PM₁₀, and PM_{2.5}. The ambient air quality data in the proposed project vicinity as recorded at the Lancaster Monitoring Station from 2016 to 2018 and the applicable state standards are shown in **Table 4.3-2**.



**Table 4.3-2
AMBIENT AIR QUALITY MONITORING DATA**

Air Pollutant	Standard/Exceedance	2016	2017	2018
Ozone (O ₃)	Max. 1-hour Concentration (ppm)	0.108	0.109	0.125
	Max. 8-hour Concentration (ppm)	0.090	0.087	0.094
	# Days > Federal 8-hour Std.	60	43	48
	# Days > California 1-hour Std.	3	10	5
	# Days > California 8-hour Std.	65	43	49
Nitrogen Dioxide (NO ₂)	Max. 1-hour Concentration (ppm)	0.0488	0.0465	0.0476
	Annual Average (ppm)	0.008	ND	0.008
	# Days > California 1-hour Std.	0	0	0
Respirable Particulate Matter (PM ₁₀)	Max. 24-hour Concentration (µg/m ³)	145.0	82.4	89.3
	Est. # Days > Fed. 24-hour Std.	0.0	0.0	0.0
	Annual Average (µg/m ³)	25.7	26.3	25.2
Fine Particulate Matter (PM _{2.5})	Max. 24-hour Concentration (µg/m ³)	64.8	33.7	42.2
	Est. # Days > Fed. 24-hour Std.	2.0	0	1.0
	Federal Annual Average (µg/m ³)	7.6	7.2	7.2

Source: ARB, 2019a

ND - There was insufficient (or no) data available to determine the value.

4.3.4 Air Quality Management Plan (AQMP)

The responsibility for the ambient air quality in the project area was legislated to the AVAQMD in 1997, when it was separated from the South Coast Air Quality Management District. The AVAQMD is the local agency with the primary responsibility for the control of non-vehicular sources of air pollution throughout the Antelope Valley. In 2004, the AVAQMD published the 2004 Ozone Attainment Plan (AVAQMD, 2004) in response to a designation of nonattainment for the 1-hour ozone NAAQS and the ozone CAAQS. The 2004 Plan demonstrated that the AVAQMD would attain the NAAQS by 2007 and presents progress toward the CAAQS. The 2004 Plan also discusses the 8-hour ozone NAAQS, which subsequently led to the publication of the Federal 8-Hour Ozone Attainment Plan (AVAQMD, 2008). The 2008 Plan was for the entire Western Mojave Desert Ozone Nonattainment Area, which includes part of the San Bernardino County portion of the Mojave Desert Air Quality Management District as well as the Antelope Valley portion of Los Angeles County. The 2008 Plan demonstrates that the AVAQMD will attain the NAAQS by June 2021. Both plans established that the AVAQMD had already adopted all reasonably available control measures.

Both the 2004 Plan and the 2008 Plan recognized that the Antelope Valley is downwind of the Los Angeles basin, and to a lesser extent, is downwind of the San Joaquin Valley. Prevailing winds transport ozone and ozone precursors from both regions into and through the Antelope Valley during the summer ozone season. These transport couplings have been officially recognized by the ARB. Local Antelope Valley emissions contribute to exceedances of both the NAAQS and CAAQS for ozone, but the Antelope Valley would



be in attainment of both standards without the influence of this transported air pollution from upwind regions.

4.3.5 Sensitive Receptors

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. For the purposes of a CEQA analysis, a sensitive receptor is a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor, because employees typically are present for shorter periods of time, such as eight hours. Therefore, applying a 24-hour standard for PM₁₀ is appropriate not only because the averaging period for the state standard is 24 hours, but because the sensitive receptor would be present at the location for the full 24 hours.

- a) **Would the project conflict with or obstruct implementation of the applicable air quality plan?**

No Impact

CEQA requires that projects be consistent with the applicable AQMP. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision-makers of the environmental efforts of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed.

AVAQMD's CEQA Guidelines (AVAQMD, 2016) state that a project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. The Guidelines also state that zoning changes, specific plans, general plan amendments, and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold.

The project has no effect on existing land use plans, will not increase dwelling use density, will not increase vehicle trips, will not increase vehicle miles traveled, and therefore has no impact.

- b) **Would the project 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?**

Less than Significant Impact

As required by the federal Clean Air Act, NAAQS have been established for the criteria pollutants described above. The State of California has also established ambient air



quality standards, known as the CAAQS. These standards are generally more stringent than the corresponding federal standards and include additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

Significance Thresholds

The AVAQMD has developed criteria for determining whether emissions from a project are regionally significant. They are useful for estimating whether a project is likely to result in a violation of the NAAQS or CAAQS, and/or whether the project is in conformity with plans to achieve attainment.

AVAQMD’s significance thresholds for criteria pollutant emissions are summarized in **Table 4.3-3**. A project is considered to have a regional air quality impact if emissions exceed the corresponding AVAQMD significance thresholds.

Table 4.3-3
AVAQMD EMISSIONS THRESHOLDS FOR SIGNIFICANT REGIONAL IMPACTS

Criteria Pollutant	Thresholds	
	Annual (tons)	Daily (pounds)
Greenhouse Gases (CO ₂ e)	100,000	548,000
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO _x)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO _x)	25	137
Respirable Particulate Matter (PM ₁₀)	15	82
Fine Particulate Matter (PM _{2.5})	12	65
Hydrogen Sulfide (H ₂ S)	10	54
Lead	0.6	3

Source: AVAQMD, 2016.

Air Quality Methodology

Due to the type of project (i.e., Intelligent Transportation System [ITS] infrastructure expansion), it was determined that emissions from the construction activities related to the project would be more appropriately estimated by using methodologies presented in existing models, including CalEEMod, the California Emissions Estimator Model (CAPCOA, 2017), and methodologies presented by USEPA, ARB, and other agencies, than by running an emissions model. Detailed calculations are presented in **Appendix B** of this IS/MND.



Regional Short-Term Air Quality Effects

The project’s construction activity includes the extension of the existing fiber optic interconnect on Avenue R from 40th Street East to 70th Street East and extend the existing interconnect on Avenue S from 55th Street East to 60th Street East. These extensions will be in the form of an underground cable system installed using directional boring, which does not require open trenches.

In addition to the fiber optic expansion, the project proposes to make improvements to several main intersections. These improvements will include construction of new traffic signals at Avenue R at 65th East (AR/65); Avenue R at 70th East (AR/70); and Avenue S at 60th East (AS/60). All three intersections also include asphalt improvements; two intersections include concrete work; and one intersection will include a guardrail barricade and an asphalt dike.

The primary source of air emissions would come from the exhaust of off-road construction equipment needed to complete these tasks.

Table 4.3-4 shows the resultant construction emissions from each activity in pounds per day and **Table 4.3-5** shows the total project’s emissions in tons. These tables demonstrate that, even though the separate activities would probably be sequential and not overlap, even with the worst-case scenario of all four activities occurring simultaneously, the project would not exceed AVAQMD regional thresholds. Therefore, the project’s regional air quality impacts would be less than significant.

Table 4.3-4
DAILY REGIONAL CONSTRUCTION EMISSIONS

Construction Activity	Emissions (lbs/day)				
	ROG	CO	NO _x	PM ₁₀	PM _{2.5}
Fiber Optic Installation	0.8	9.4	7.5	0.4	0.4
Avenue R/65 th Street Improvements	1.1	9.0	9.4	0.5	0.5
Avenue R/70 th Street Improvements	1.0	8.4	8.5	1.4	0.4
Avenue S/60 th Street Improvements	1.2	9.9	10.2	1.1	0.5
Grand Total	4.0	36.7	23.6	3.5	1.9
<i>AVAQMD Significance Thresholds</i>	<i>137</i>	<i>548</i>	<i>137</i>	<i>82</i>	<i>65</i>
Significant (Yes or No)	No	No	No	No	No



**Table 4.3-5
TOTAL REGIONAL CONSTRUCTION EMISSIONS**

Construction Activity	Emissions (tons)				
	ROG	CO	NO _x	PM ₁₀	PM _{2.5}
Fiber Optic Installation	0.013	0.143	0.114	0.007	0.006
Avenue R/65 th Street Improvements	0.004	0.030	0.032	0.002	0.002
Avenue R/70 th Street Improvements	0.003	0.029	0.029	0.004	0.002
Avenue S/60 th Street Improvements	0.004	0.031	0.032	0.003	0.002
Grand Total	0.02	0.23	0.21	0.02	0.01
<i>AVAQMD Significance Thresholds</i>	25	100	25	15	12
Significant (Yes or No)	No	No	No	No	No

c) **Would the project expose sensitive receptors to substantial pollutant concentrations?**

Less than Significant Impact

According to the AVAQMD CEQA Guidelines (AVAQMD, 2016), 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:

- Any industrial project within 1,000 feet
- A distribution center (40 or more trucks per day) within 1,000 feet
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet
- A dry cleaner using perchloroethylene within 500 feet
- A gasoline dispensing facility within 300 feet

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. Therefore, TAC emissions were not calculated, and the proposed project was not evaluated for potential health risks to sensitive receptors.

The project would expand existing fiber optic cable, construct signal lights, and conduct minor roadway design improvements and would not include activities that would generate substantial pollutant concentrations. Impacts would be less than significant.



- d) **Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

Less than Significant Impact

Construction-related sources of odors will come from construction equipment ranging from exhaust fumes to grease and oils. Impacts from construction-generated odors can be dependent upon the source, frequency of the generation of the odor, intensity, wind direction, and receptor sensitivity. The impacts from odors would be temporary and will occur only during construction. The short-term odors that would be generated by the equipment would dissipate. Therefore, impacts would be less than significant.



4.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	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		
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 U.S. Fish and Wildlife Service?				X
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
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
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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



- a) **Would the project 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?**

Less than Significant Impact with Mitigation Incorporated

The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) search of the project area resulted in known occurrences of five sensitive species within a two-mile radius of the project site (CDFW, 2018). **Figure 4.4-1** shows the CNDDDB species known occurrences within two miles of the project site. These species include:

- Mohave ground squirrel (*Xerospermophilus mohavensis*): State-listed as Threatened
- Burrowing owl (*Athene cunicularia*): CDFW Species of Special Concern (SSC)
- Coast horned lizard (*Phrynosoma blainvillii*): CDFW SSC
- Northern California legless lizard (*Anniella pulchra*): CDFW SSC
- Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*): CRPR: 2B.2¹⁰

The project site is located in a highly-urbanized setting which provides low habitat value for special-status plant and wildlife species. The project site primarily consists of existing paved roadway with sidewalks and impervious surfaces that lack suitable soils, biological resources, and physical features to support any candidate, sensitive, or special-status plant and animal species. The proposed project includes construction of fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals within two project areas, which include portions of Avenue R and Avenue S, east of State Route 14 (SR 14). All construction activities would be performed within rights-of-way of existing public streets. Therefore, the project would have no impacts on these species.

The Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code render it unlawful to take native breeding birds, their nests, eggs, and young. The project site contains ornamental trees in the residential areas adjacent to the project site that could potentially provide cover and nesting habitat for common bird species that have adapted to urban areas, such as rock pigeons (*Columba livia*) and mourning doves (*Zenaida macroura*). Indirect impacts on nesting birds could occur from increased noise, vibration, and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. As a result, the project has the potential to impact migratory non-game breeding birds, and their nests,

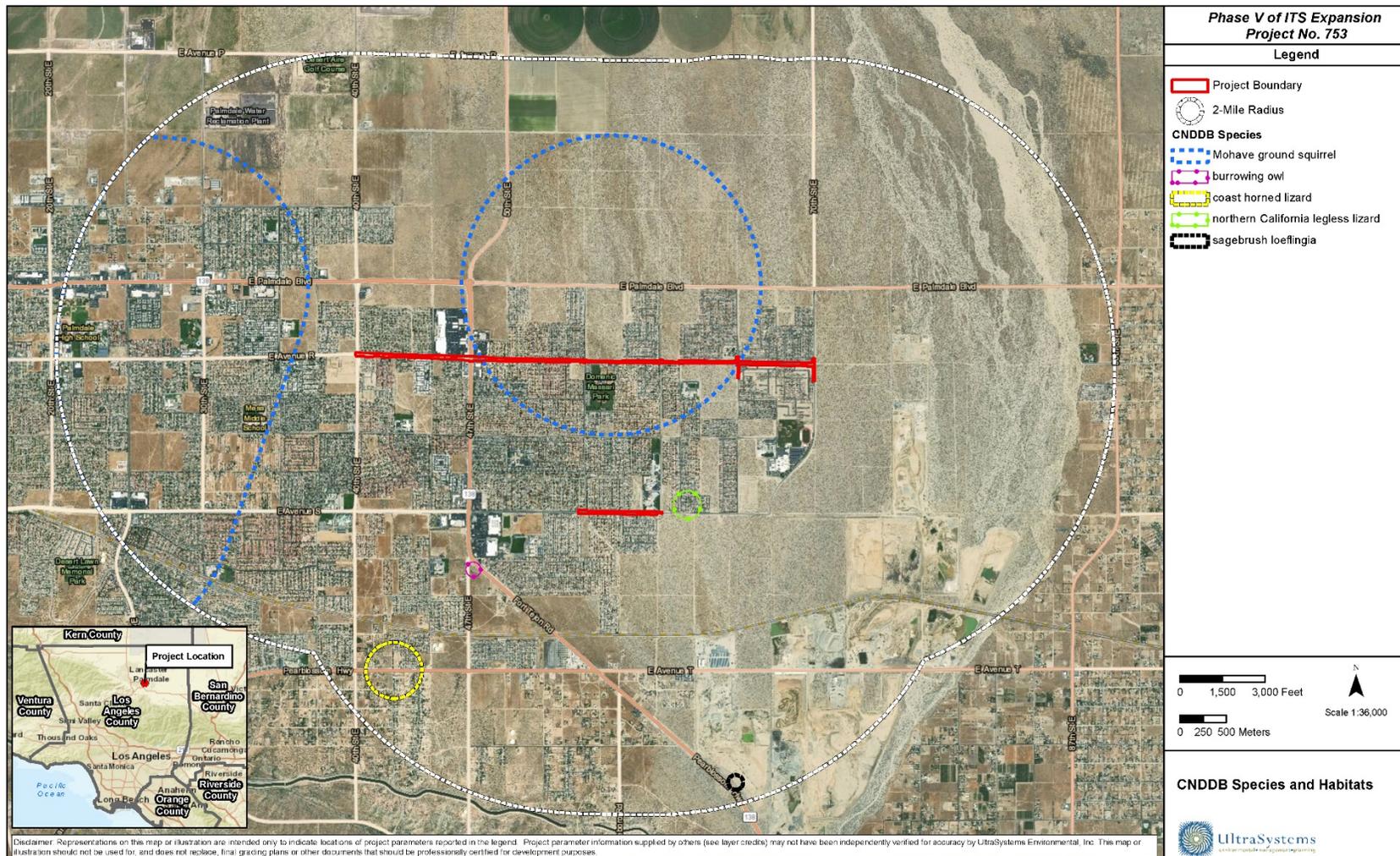
¹⁰ California Rare Plant Rank (CRPR) 2B.2 = plants rare, threatened, or endangered in California, but more common elsewhere. Fairly endangered in California (20-80 percent occurrences threatened).



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young and eggs. Mitigation measure **BIO-1** would be implemented to reduce potential impacts on nesting birds.

**Figure 4.4-1
CNDDB SPECIES AND HABITATS**





Mitigation Measure

Pre-Construction Nesting Bird Surveys

MM BIO-1: If construction begins during nesting bird season (generally February – August 31), no later than one week prior to ground-disturbing activities within the project site, a qualified biologist shall conduct preconstruction nesting bird clearance surveys within the project site and within a 100-foot buffer around the project site for nesting birds, and other sensitive species. To maintain compliance with the MBTA and California Fish and Game Code, and to avoid or minimize direct and indirect effects on migratory non-game nesting birds, and their nests, young, and eggs, the following measures shall be implemented.

- Construction activities that will remove or disturb potential nest sites should be scheduled outside the nesting bird season, if feasible. The nesting bird nesting season is typically from February 1 through August 31, but can vary slightly from year to year, usually depending on weather conditions. Raptors are known to begin nesting early in the year and end late. The raptor nesting bird season begins January 1 to September 15.
- If construction activities that will disturb potential nest sites (e.g., trees and shrubs) cannot be avoided between January 31 and August 31, a qualified biologist shall conduct a pre-construction survey for nesting birds within the limits of project disturbance within seven calendar days prior to mobilization, staging and other project-related disturbance. Preconstruction surveys shall be conducted no more than seven days prior to vegetation trimming or removal, grubbing or grading, structure removal, or other construction-related disturbance.
- If an active bird nest is located during the pre-construction survey and potentially will be affected, a no-activity buffer zone shall be delineated on maps and marked in the field by fencing, stakes, flagging, or other means up to 500 feet for raptors, or 100 feet for non-raptors, or as determined by a qualified biologist. Materials used to demarcate the nests shall be removed as soon as work is complete or the fledglings have left the nest. The qualified biologist shall determine the appropriate size of the buffer zone based on the type of activities planned near the nest and the species of the nesting bird. Buffer zones shall not be disturbed until a qualified biologist determines that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be affected by construction activities. Periodic monitoring by a biological monitor will be performed to determine when nesting is complete. After the nesting cycle is complete, construction activities may begin within the buffer zone.



- If neither nesting birds nor active nests are observed during the pre-construction survey(s), or if they are observed and would not be affected (i.e., are outside the buffer zone described above), then construction activities may begin and no further nesting bird monitoring will be required.

Level of Significance After Mitigation

Less than Significant with Mitigation Incorporated - With implementation of mitigation measure **BIO-1**, potential impacts on nesting bird species protected by the MBTA would be less than significant.

- b) Would the project 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 U.S. Fish and Wildlife Service?**

No Impact

The project site is not located within designated or proposed critical habitat for listed plant or wildlife species. The nearest critical habitat location is for the Arroyo toad (*Anaxyrus californicus*) approximately six miles south of Avenue S. **Figure 4.4-2**, depicts the location of the nearest United States Fish and Wildlife Service (USFWS) critical habitat and **Figure 4.4-3** shows the mapped Significant Ecological Areas (SEAs) and Sensitive Environmental Resource Areas (SERAs) in the vicinity of the project site. As shown on **Figure 4.4-3**, the project site is not located within a SEA or SERA.

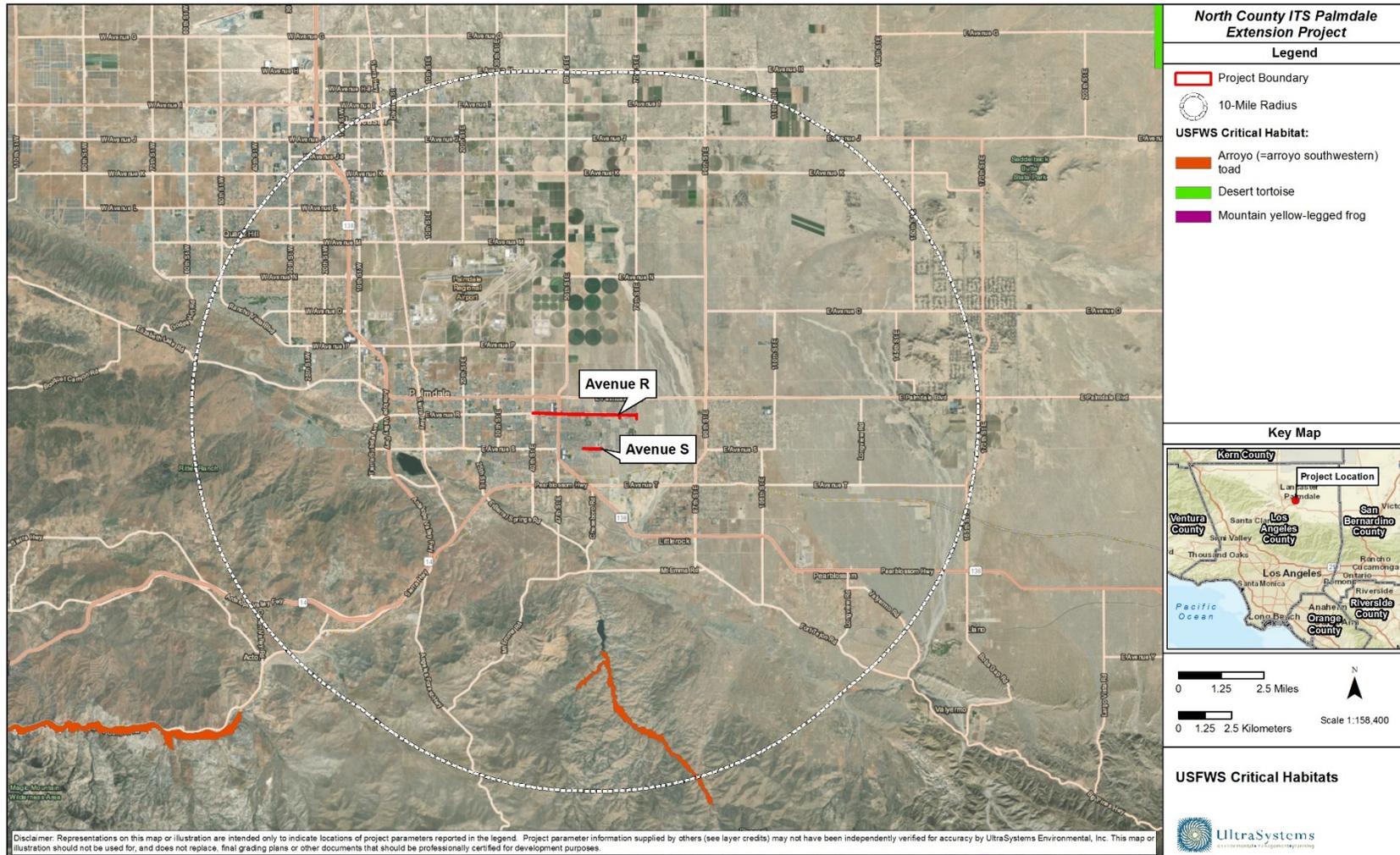
The project site is a developed major arterial roadway that is covered with paving and sidewalks. Riparian habitat or other sensitive natural communities do not exist on or adjacent to the project site. All construction activity would be performed within rights-of-way of existing public streets. For this reason, no direct or indirect impacts on riparian habitat or other sensitive natural communities are anticipated as a result of the project, thus the project would have no impact on riparian habitat or other protected sensitive natural community and no further analysis is required.

- c) Would the project 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?**

No Impact

As shown on **Figure 4.4-4**, no wetlands occur on or adjacent to the project site. Therefore, no direct or indirect impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act would occur through direct removal, filling, hydrological interruption, or other means, as a result of project activities. No impact would occur and no further analysis is required.

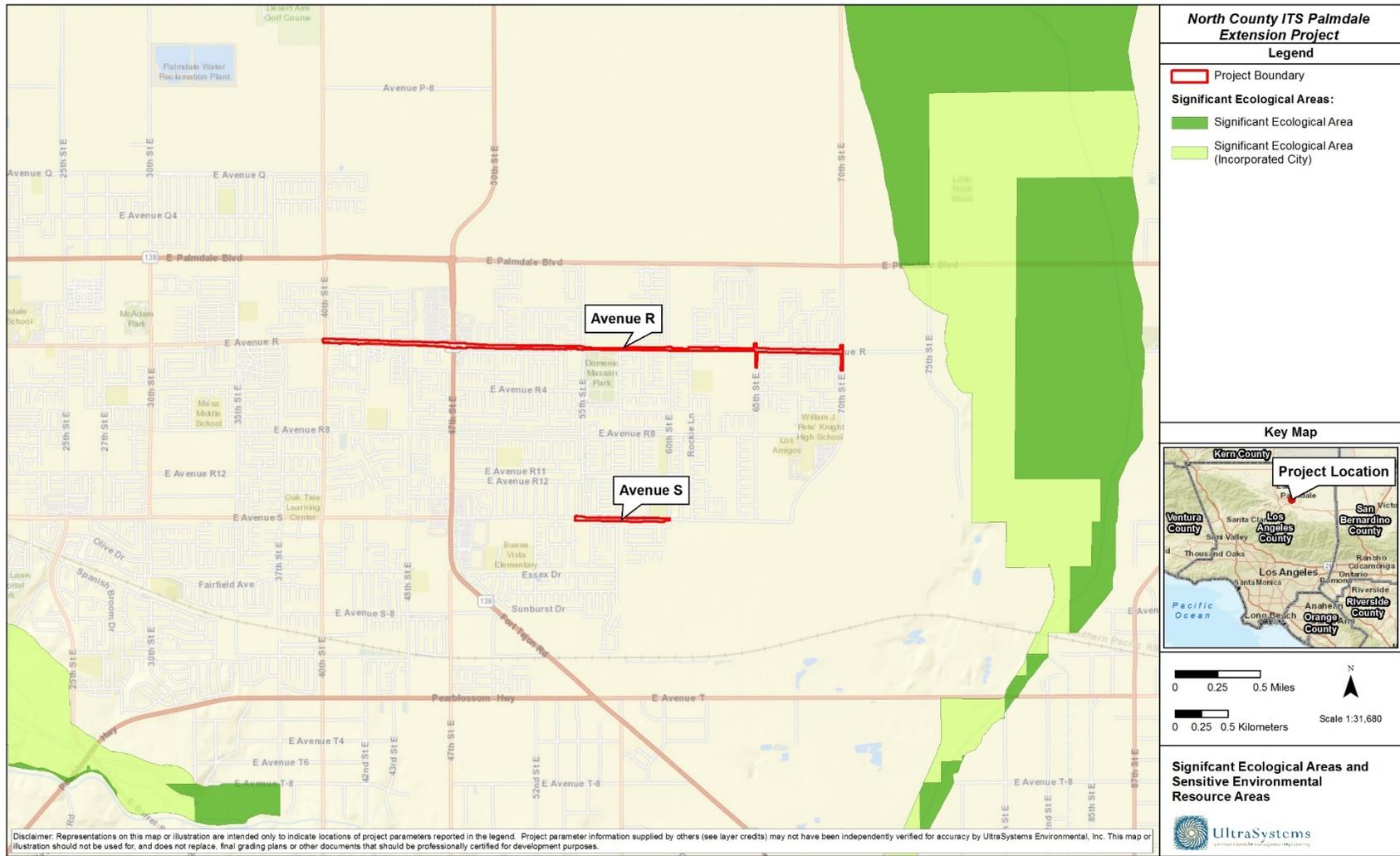
**Figure 4.4-2
USFWS CRITICAL HABITATS**



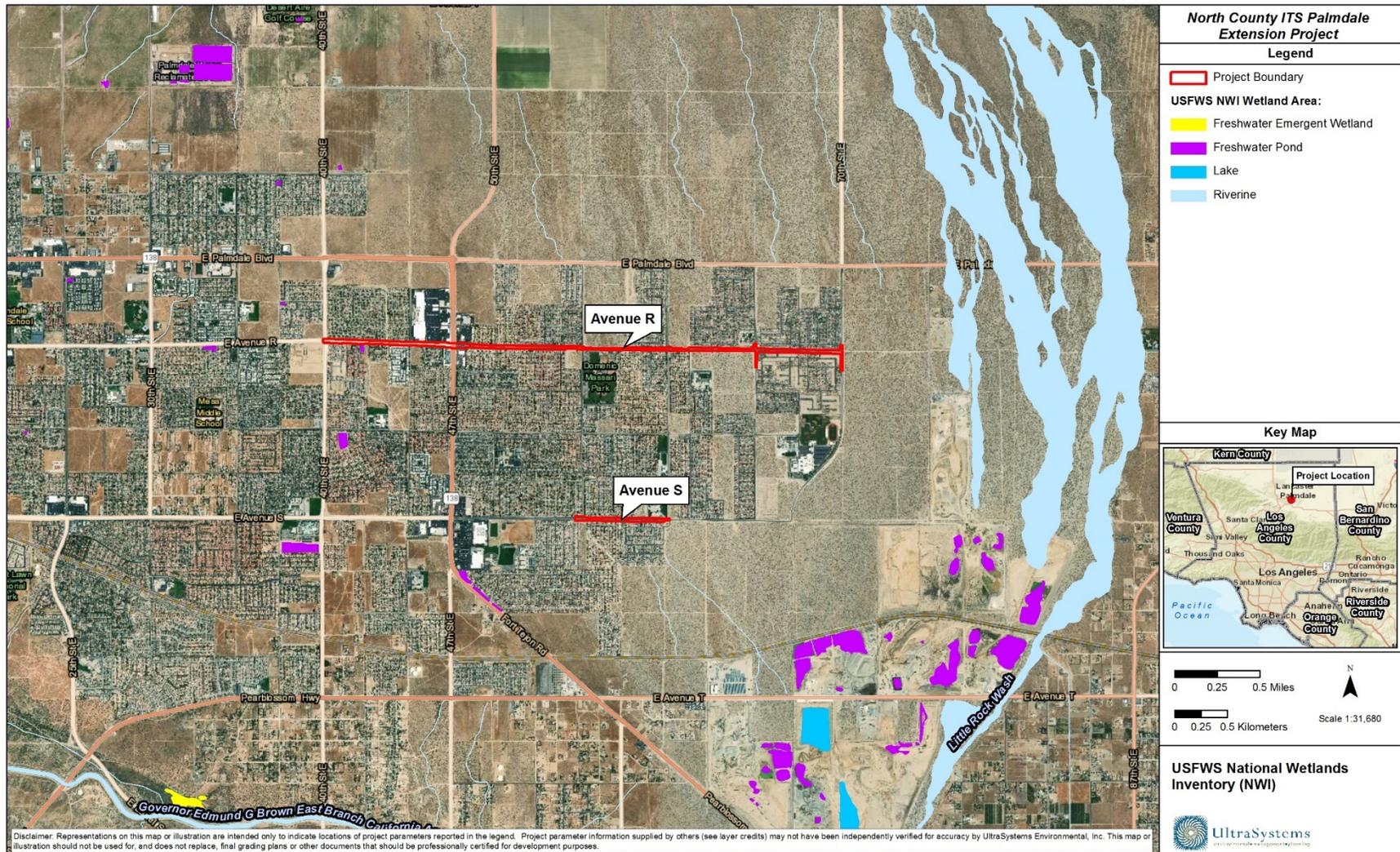
May 7, 2018



Figure 4.4-3
SIGNIFICANT ECOLOGICAL AREAS AND SENSITIVE ENVIRONMENTAL RESOURCE AREAS



**Figure 4.4-4
USFWS NATIONAL WETLANDS INVENTORY**





- d) **Would the project 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?**

No Impact

The project site and surrounding areas do not support resident or migratory fish species or wildlife nursery sites. As shown on **Figure 4.4-5**, the project site is not located within a CDFW-designated Essential Connectivity Area or Natural Landscape Block. The closest Natural Landscape Block is located approximately five miles south of Avenue S. All construction activity would be performed within the rights-of-way of the existing public streets. Therefore, there would be no impacts regarding movement of native resident or migratory fish, or wildlife species, or with established native resident or migratory wildlife corridors, or native wildlife nursery sites. No impact would occur and no further analysis is required.

- e) **Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

No Impact

The City of Palmdale Municipal Code Title 14, Environmental Management, addresses biological resources. It includes two chapters; Chapter 14.04, which addresses Joshua Tree and Native Desert Vegetation Preservation; and Chapter 14.05, which addresses Water Efficient Landscape. Subsection 14.04.030(C) defines “Desert vegetation” as Joshua trees and California juniper, and other living plants identified pursuant to the California Desert Native Plants Act (Food and Agricultural Code Section 80001, et seq.) as protected or designated on any state or federal rare and endangered species list.

The land immediately surrounding the site is urban/residential and the project site is developed paved roadway and sidewalks. There are no Joshua trees or native desert vegetation protected by the City of Palmdale present within the project site and no Joshua trees or native desert vegetation protected by the City of Palmdale would be impacted from construction or operation of the project. Therefore, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, no impact would occur and no further analysis is required.

- f) **Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

No Impact

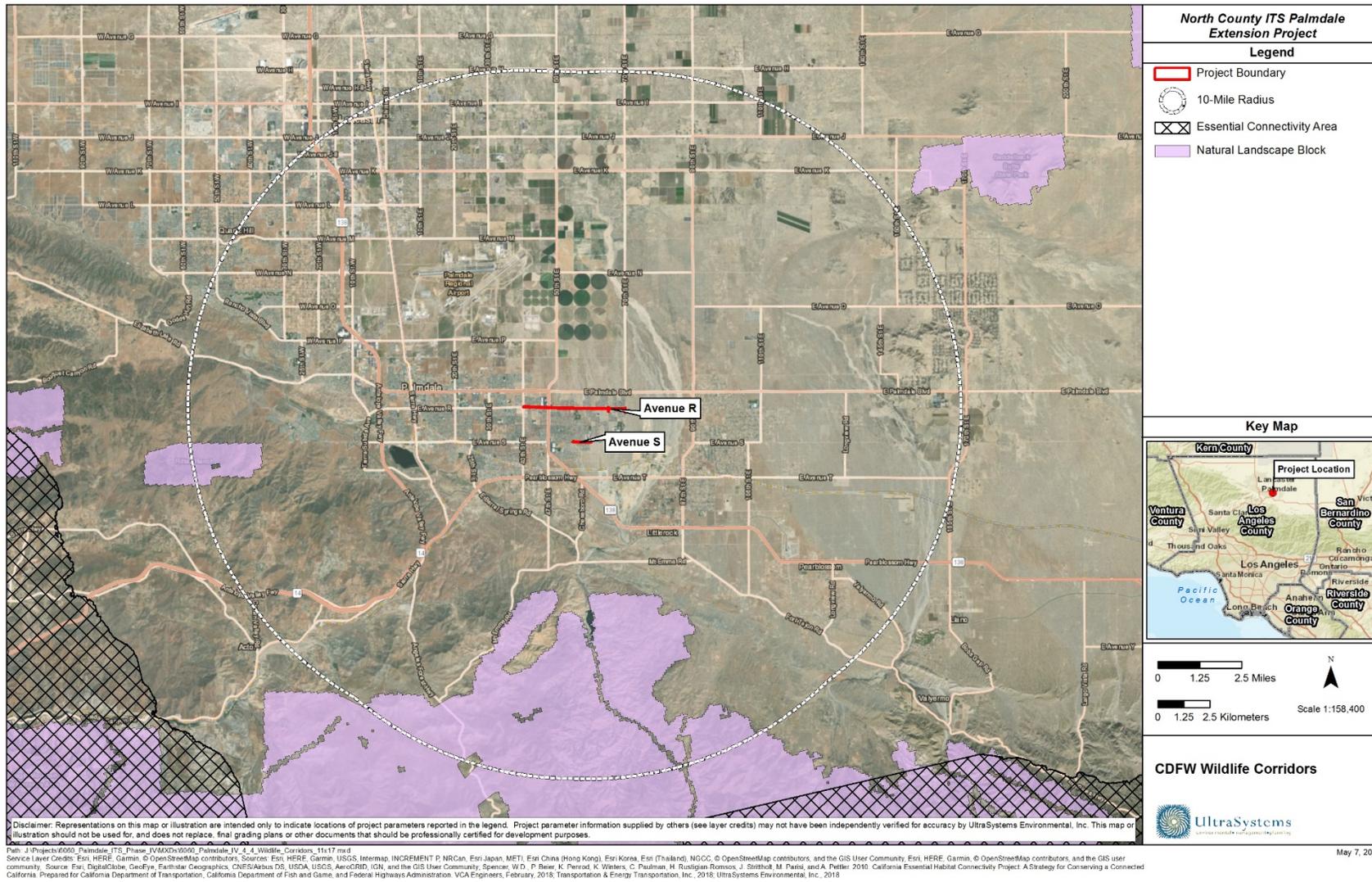
The project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other approved plans (CDFW, 2017; CDFW,



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2019). Therefore, no impact would occur as a result of project development and no further analysis is required.

**Figure 4.4-5
CDFW WILDLIFE CORRIDORS**





4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

The following is a summary of the information contained in the Cultural Resource Inventory Report of the project site (see **Figure 4.5-1**) prepared by UltraSystems dated August 2019. A copy of the report is included as **Appendix C** of this Initial Study/Mitigated Negative Declaration.

The cultural resources inventory included a background archaeological records check (archival research) at the South Central Coastal Information Center (SCCIC), located at the California State University, Fullerton. Background information included a Sacred Lands File (SLF) search request to the Native American Heritage Commission (NAHC), at which time a list of local Native American entities to contact was also requested. A pedestrian cultural resource survey of the project area was also conducted. This section presents the results of the cultural resource study including cultural resource management recommendations.

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

No Impact

Based on the cultural resources records search conducted at the SCCIC, three historic cultural resource sites have been recorded within the 0.5-mile radius Area of Potential Effect (APE) boundary of the project site. Based on the results of record search, three historic cultural resource sites/features are recorded within the half-mile radius buffer zone of the APE. Designated CA-LA-1588H, -1609H and 1610H, were approximately turn of the 20th century domestic trash sites or similar era homesites with trash deposits near Avenue R and/or 70th Street East, the route of the proposed project. All three sites have subsequently been demolished by residential development. They are described more fully in Section 4.1 of **Appendix C** to this IS/MND. No historic resources were observed during the pedestrian survey. Therefore, no impact would occur.



- b) **Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

Less than Significant Impact with Mitigation Incorporated

The result of the pedestrian survey conducted on July 4, 2018, was negative for both prehistoric and historic sites, and for cultural resource isolates on the project site. According to the records search conducted at the SCCIC on May 3, 2018, there have been four previous cultural resource surveys (LA-1787, LA-1837/LA-27167, and LA-3537) that included a portion of the northern portion of the project area along Avenue R. There were another three surveys that included portions of the southern Project area along Avenue S. The records search also identified 17 additional surveys within the 0.5-mile radius project buffer but did not include any portion of the project APE. As noted above, none of these surveys which recorded prehistoric or historic cultural resources are within the project boundary. No prehistoric resources were observed during the pedestrian survey.

A NAHC SLF search within a 0.5-mile buffer around the project site was requested by UltraSystems on May 3, 2018 and the results were reported on May 7, 2018. The NAHC letter indicated that was negative for the presence of tradition cultural resources within this area. The NAHC sent a list of eight local tribal contacts at five Native American tribes. Letters, emails and faxes were sent to these tribes on May 7, 2018 requesting a reply if they have knowledge of cultural resources in the area that they wished to share, and asking if they had any questions or concerns regarding the project. These tribes were the:

- Fernandeno Tataviam Band of Mission Indians
- Morongo Band of Mission Indians
- San Fernando Band of Mission Indians
- San Manuel Band of Mission Indians
- Serrano Nation of Mission Indians

Of the parties that responded, none were aware of tribal resources at the project site. However, the Fernandeno Tataviam Band of Mission Indians stated that there are significant cultural resources within approximately two miles south of the project location.

Based on the results of the CHRIS records search, a search of the SLF by the NAHC, tribal consultation, the onsite field survey, and research on the ethnography and prehistory of the region (see **Appendix C**), this region is known to have been utilized by the Vanyume (Desert Serrano), Tataviam and earlier Native American populations. However, there is a low potential for the presence of cultural resources that could be adversely affected by construction of the project because there are no known sites in the immediate area of the project site.

It is not likely that undisturbed unique archeological resources exist on the project site as determined by the cultural resources investigation conducted by UltraSystems. However, subsurface trenching activities associated with the project could result in the unanticipated discovery of unique archeological resources. In the event of an unexpected



discovery, implementation of mitigation measures **CUL-1**, **CUL-2** and **CUL-3** would ensure that impacts to archaeological resources would be less than significant.

Mitigation Measure

MM CUL-1: A Worker Environmental Awareness Program (WEAP) Training shall be prepared and customized for the project area and proposed project site that describes the types of local Native American resources that are commonly found subsurface in interior Southern California. It shall include a brief description of the local tribes, the Tataviam and Serrano, including information from local tribal groups on their concerns for discoveries. Also included shall be descriptions and illustrations of common paleontological resources that may be encountered in the soil on the project site. Related local, state and federal regulations and laws shall be noted, as well as procedures to follow if cultural and/or paleontological resources are uncovered. This presentation shall be designed for the layman. Figures of common artifacts and fossils and a review of the project site shall be included. Materials shall be provided to the City, including copies of the PowerPoint presentation on either a CD or a “thumb drive” and hard copies of the presentation, so that City staff and project contractor supervisors themselves can give this training to construction crew.

MM CUL-2: In the event that cultural resources are discovered during project activities, 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. Additionally, the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) and the Fernandño Tataviam Band of Mission Indians (FTBMI) Tribal Historic and Cultural Properties Officer shall be contacted, as detailed within MM TCR-1 (refer to **Section 4.18**), regarding any pre-contact finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.

MM CUL-3: 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 SMBMI and FTBMI for review and comment, as detailed within **MM TCR-1**. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.



Level of Significance After Mitigation

With implementation of mitigation measures **CUL-1**, **CUL-2** and **CUL-3**, potential impacts related to archaeological resources would be less than significant. No further evaluation is required.

- c) **Would the project disturb any human remains, including those interred outside of formal cemeteries?**

Less than Significant Impact with Mitigation Incorporated

As previously discussed in **Section 3.0**, the project would occur on developed roadways within a heavily built suburban area that has been previously disturbed.

Implementation of mitigation measure **CUL-4** would ensure that impacts related to the accidental discovery of human remains would be less than significant.

Mitigation Measure

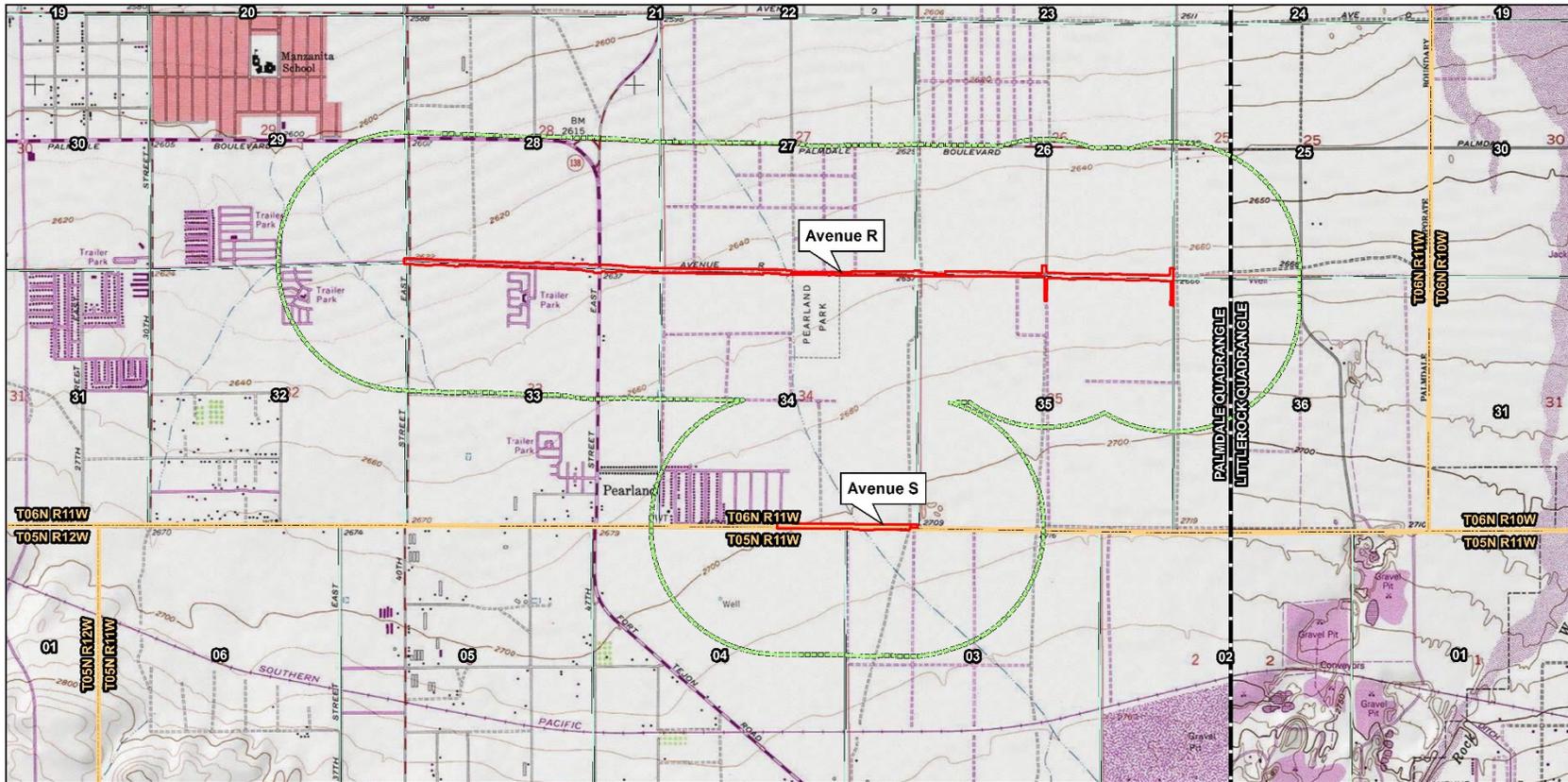
MM CUL-4: If human remains are encountered during excavations associated with this project, all work shall stop within a 30-foot radius of the discovery and the Los Angeles County Coroner shall be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC and receiving access to the project site. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).

Level of Significance After Mitigation

With implementation of mitigation measure **CUL-4**, potential impacts related to the discovery of unknown human remains would be less than significant. No further evaluation is required.



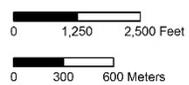
**Figure 4.5-1
TOPOGRAPHIC MAP – PALMDALE QUAD**



Path: J:\Projects\0600_Palmdale_ITS_Phase_IV\MMXD\0600_Palmdale_IV_4_5_Topo_2019_08_28_Landscape.mxd
Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed, LA County Assessor, 2017-2018, LA County DPW, 2018, UltraSystems Environmental, Inc. 2018

August 28, 2019

Scale 1:24,000



Legend

- Project Boundary (Approximate)
- Half-Mile Buffer
- Quadrangle Boundary
- Township Boundary
- Section Boundary

**North County ITS Palmdale
Extension Project**

Topographic Map
USGS Quadrangle: Palmdale
Township: 6N Range: 11W





4.6 Energy

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	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	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

- a) **Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

Less than Significant Impact

Construction

The types of energy used during the construction phase of the project would include electricity and diesel and/or motor fuels. Electricity usage would come from the use of equipment, lighting during construction, dust control, and during the production of materials such as asphalt, steel, concrete, pipes, and other materials. Construction would require the use of petroleum-based fuels to power construction vehicles, equipment, and motor vehicles due to worker commuting. Construction activities typically do not involve the consumption of natural gas, thus no demand for natural gas is anticipated. The energy use during construction would be temporary and would end when the project is completed.

In accordance with the City of Palmdale Municipal Code (Chapter 8.28, Building Construction Hours of Operation and Noise Control, Subsection 8.28.030 Construction Noise Prohibited in Residential Zones) no person shall perform any construction or repair work on any Sunday, or any other day after 8:00 p.m. or before 6:30 a.m., in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park. (Ord. 1335 § 1, 2007; Ord. 584 § 1, 1986).

As discussed in **Section 3.4**, construction would only occur between 8 a.m. and 4 p.m., Monday through Friday. Equipment to be used onsite includes excavators, earthmovers, frontend loaders, backhoes, compactors, cement mixers, water trucks, cranes, forklifts, and other typical construction equipment.



Construction Electricity

During project construction, energy would be consumed in the form of electricity, as needed, associated with the conveyance and treatment of water used for dust control and powering lights, electronic equipment, or other construction activities requiring electrical power. Electricity usage associated with lighting and construction equipment that utilizes electricity is not easily quantifiable or readily available thus the estimated electricity usage during project construction is speculative. As discussed in **Section 3.4**, construction would only occur between 8 a.m. and 4 p.m., therefore nighttime lighting for construction activities is not anticipated but direct lighting for excavated or augured work areas would be used as needed.

Lighting used during project construction would comply with Title 24 standards/requirements (such as wattage limitations). This compliance would ensure that electricity use during project construction would not result in the wasteful, inefficient, or unnecessary use of energy. Lighting would be used in compliance with applicable City of Palmdale Municipal Code requirements to create enough light for safety. Therefore, the use of electricity for project construction activities would not result in wasteful, inefficient, or unnecessary use of energy and impacts would be less than significant.

Construction Petroleum-based Fuels

Project construction would consume energy in the form of petroleum-based fuels associated with the use of construction vehicles and equipment on the project site, construction worker travel to and from the project site, and delivery and haul truck trips hauling solid waste from and delivering building materials to the project site. During project construction, trucks and construction equipment would be required to comply with the California Air Resources Board's (CARB's) anti-idling regulations. CARB's In-Use Off-Road Diesel-Fueled Fleets regulation would also apply. Vehicles driven to or from the project site (delivery trucks, construction employee vehicles, etc.) are subject to fuel efficiency standards requirements established by the Federal Government. Therefore, fuel usage for project construction activities are not expected to result in wasteful, inefficient, or unnecessary use of energy and impacts would be less than significant.

Operation

Energy would be consumed during project operations related to equipment electricity use and fuel use during vehicle trips for periodic maintenance activities. Equipment using electricity during operation includes fiber optic lines, traffic signals, CCTVs, and street lights. The project would comply with applicable regulations and codes which require achievement of various levels of energy efficiency in operation. The new traffic signals and equipment would be more energy efficient and result in less energy use than the existing equipment.

Furthermore, an indirect beneficial impact would be the reduction of the use of vehicle fuel as a result of more efficient traffic flow. Measure 4.3: "Improve Traffic Flow" of the Palmdale Energy Action Plan (PEAP) (PMC, 2011) includes action measure 4.3.1



Implement the Traffic Signal Synchronization program. This program includes traffic signal synchronization along 11 miles of roadway throughout the city, including the synchronization of 49 traffic signals along sections of Rancho Vista Boulevard, 10th Street West, Avenue R, and Avenue S. The synchronization of traffic signals allows increased traffic mobility and relieves existing traffic congestion by reducing delays in travel times. The synchronization of these traffic signals would help reduce fuel consumption and improve air quality, increase traffic mobility, and relieve existing traffic congestion by reducing delays and travel times. (PMC, 2011, p.6-34).

In summary, the energy demand associated with operation of the project would be less than the existing conditions and, therefore, would have no impact.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact

As discussed above, the project is included in the PEAP under Measure 4.3 to improve traffic flow and sub-measure 4.3.1 to implement the Traffic Signal Synchronization program. The purpose of the project is to implement a portion of Measure 4.3 of the approved PEAP in order to increase traffic mobility and reduce fuel consumption. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and there would be no impact in this regard.



4.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential 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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
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	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
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
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		



- a) **Would the project directly or indirectly cause potential 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.**

Less than Significant Impact

The proposed project is within a seismically active region of California within the influence of several fault systems. However, according to the California Department of Conservation,¹¹ the project site is not located within the boundaries of a designated Alquist-Priolo Earthquake Fault Zone.¹² (Refer to **Figure 4.7-1.**) The site is not located in a Los Angeles County Fault Zone. (Refer to **Figure 4.7-2.**) The closest active fault to the project site is the San Andreas Fault Zone located approximately 1.8 miles southwest of the project site. For these reasons, impacts related to the rupture of known earthquake faults would be less than significant.

- ii) **Strong seismic ground shaking?**

Less than Significant Impact

The proposed project is within a seismically active region, which could potentially cause collapse of structures, buckling of walls, and damage to foundations from strong seismic ground shaking. The proposed project involves the installation and operation of traffic signals. The project would not involve development of structures for human occupancy, and would not cause hazards to people or structures arising from effects of strong ground shaking on structures., impacts resulting from strong seismic ground shaking would be less than significant.

- iii) **Seismic-related ground failure, including liquefaction?**

No Impact

Liquefaction typically occurs when a saturated or partially saturated soil behaves like a liquid as a result of losses in strength and stiffness in response to an applied stress caused by earthquake shaking or other sudden change in stress conditions. According to the California Department of Conservation,¹³ the project site is not located within a zone of required investigation for liquefaction. For these reasons, no impacts to people or structures due to liquefaction and seismically induced settlement would occur.

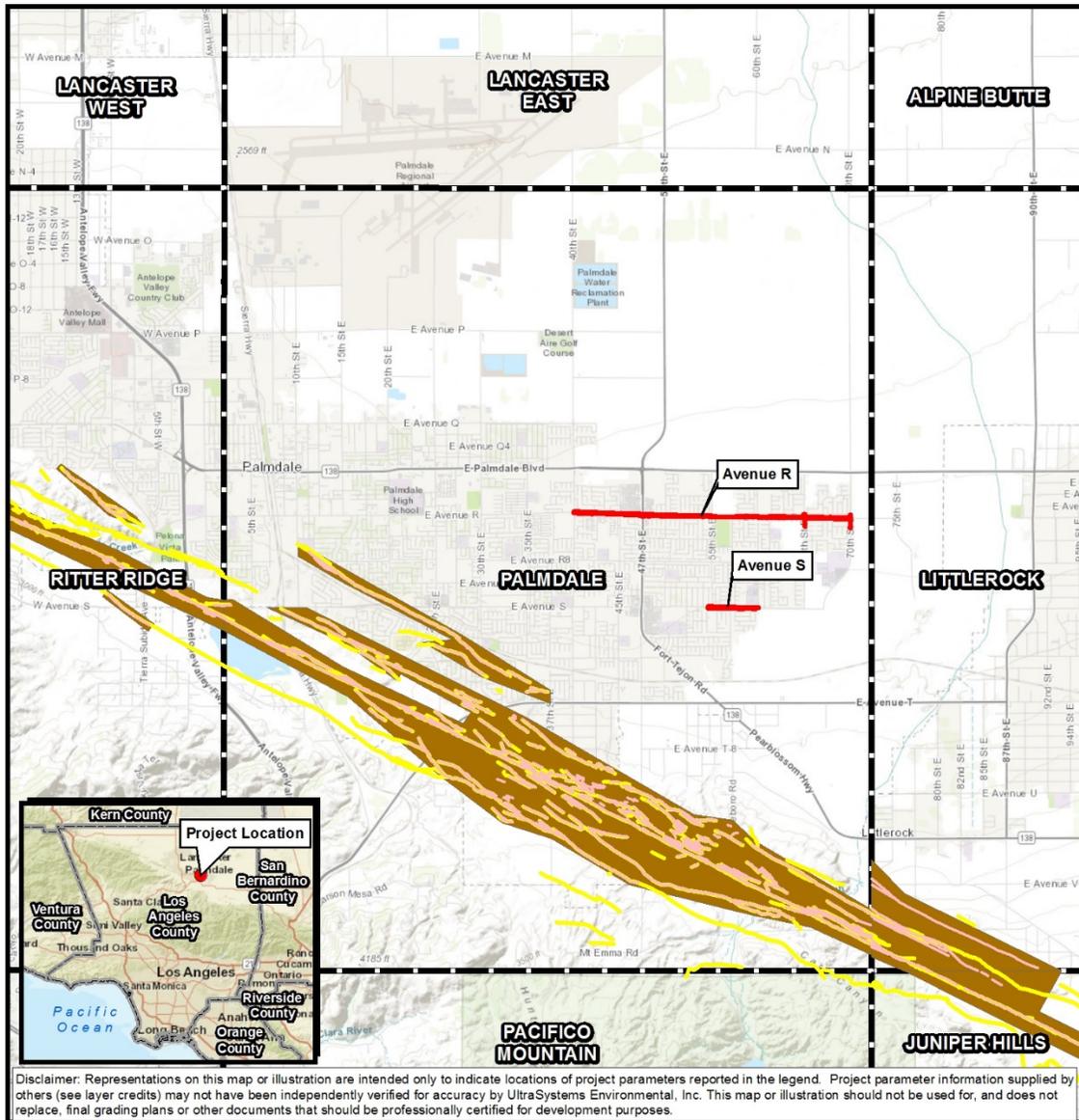
11 <https://maps.conservation.ca.gov/cgs/EQZApp/app/> Accessed on June 25, 2019. /

12 Prior to January 1, 1994, Alquist-Priolo Earthquake Fault Zones were known as "Special Studies Zones."

13 <https://maps.conservation.ca.gov/cgs/EQZApp/app/> Accessed on June 25, 2019.



Figure 4.7-1 ALQUIST-PRIOLO FAULT ZONE MAP



Path: J:\Projects\6060_Palmdale ITS_Phase IV\MXDsv\6060_Palmdale_IV_4_6_Alquist Priolo.mxd
 Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community, Teale Data Center GIS Solutions Group, 2003, LA County Assessor, 2016-2017, CA Dept. of Conservation, 2002, Transportation & Energy Solutions, Inc., 2016, UltraSystems Environmental, Inc., 2017

Scale 1:95,040

0 0.75 1.5 Miles

0 0.75 1.5 Kilometers

Legend

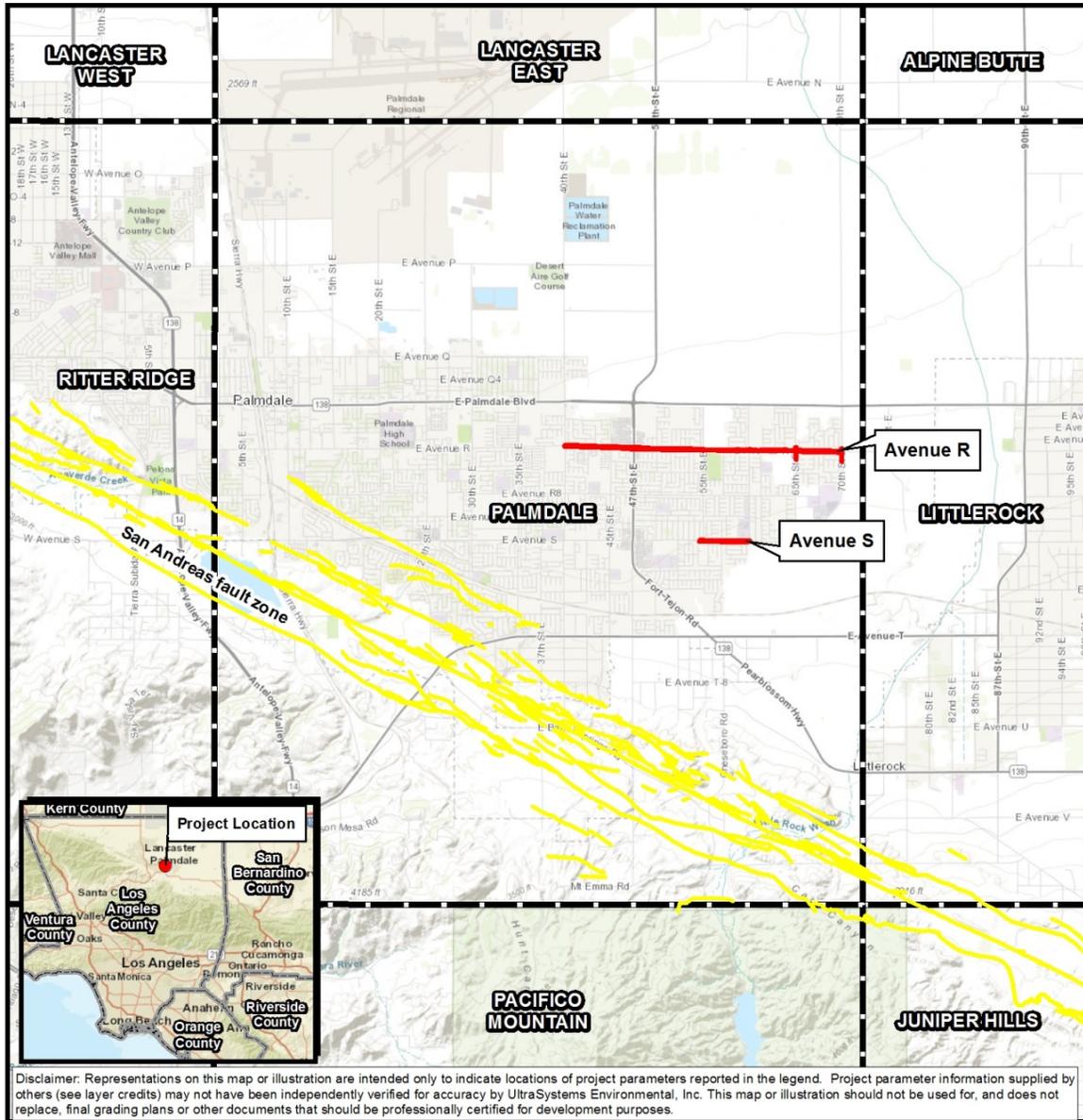
- Project Boundary
- Alquist Priolo Special Study Zone Boundary
- Alquist Priolo Potentially Active Fault
- Quaternary Fault
- USGS Quadrangle Boundary

North County ITS Palmdale Extension Project

Alquist Priolo Earthquake Fault Zones



**Figure 4.7-2
ACTIVE FAULTS IN REGION**



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

May 7, 2018

Path: J:\Projects\6060_Palmdale ITS_Phase IV\MXDs\6060_Palmdale_IV_4_6_Active_Faults.mxd
 Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community, Teale Data Center GIS Solutions Group, 2003, U.S./California Geological Survey, 2006; Transportation & Energy Solutions, Inc., 2018; UltraSystems Environmental, Inc., 2018

Legend

- Project Boundary
- Quaternary Fault
- USGS Quadrangle Boundary

North County ITS Palmdale Extension Project
Regionally Active Faults

Scale 1:95,040

N

0 0.75 1.5 Miles

0 0.75 1.5 Kilometers



iv) Landslides?

No Impact

The area surrounding the project site is relatively flat. According to the California Department of Conservation,¹⁴ the project site is not located within a landslide zone. For these reasons, no impacts to people or structures due to landslides are anticipated.

b) **Would the project result in substantial soil erosion or the loss of topsoil?**

Less Than Significant Impact

Ground surface disturbance would occur during project construction activities such as excavation and trenching. These activities may disturb substantial amounts of soil, resulting in the potential for soil erosion. However, this potential would be reduced through erosion control measures. In addition, the project would adopt construction best management practices (BMPs) to avoid and minimize the transport of soil or contaminants offsite. Impacts resulting from soil erosion would be less than significant.

c) **Would the project 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?**

Less than Significant Impact

Impacts related to liquefaction and landslides are discussed above in Section 4.7 a). Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. As the subsurface soil conditions are not conducive to liquefaction, the potential for lateral spread occurring at the project site is considered unlikely. Impacts resulting from unstable geology or unstable soils would be less than significant.

d) **Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?**

Less than Significant Impact

Expansive soils shrink and swell with changes in soil moisture. Soil moisture may change from landscape irrigation, rainfall, and utility leakage. Expansive soils are commonly very fine-grained with high to very high percentages of clay. Soils with an Expansion Index (EI)

¹⁴ Ibid.



greater than 20 are considered expansive according to § 1803.5.3 of the California Building Code (CBC). The project site is not located in an area mapped for potentially expansive soils (Palmdale General Plan, 1993d). Potential impacts would be less than significant.

- e) **Would the project 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?**

No Impact

The proposed project would not require sewer service and would not include septic tanks or alternative waste water disposal systems. For this reason, no impacts from septic tanks or alternative waste water disposal systems within the project site would occur.

- f) **Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Less than Significant with Mitigation

UltraSystems requested a paleontological resources records search at the Los Angeles County Museum of Natural History. The results of the paleontological resources records search for the proposed project site are provided in **Appendix D** to the this IS/MND.

The project site boundary encompasses two separate but related geological deposits (Lancaster et al. 2012). The far western portion of Avenue R within the project site is underlain by Young Alluvial Fan Deposits (Qyf), consisting of lacustrine, playa and estuarine deposits dating to the Holocene (11,650 years before present [ybp] to modern times) to Late Pleistocene (126,000 to 11,650 years ybp) – boulder, cobble, gravel, sand and silt deposits issued out from a valley or canyon. The majority of the project site including the eastern portion of Avenue R and Avenue S within the project boundary are underlain by Alluvial Fan Deposits (Qa), consisting of alluvial valley deposits dating to the Late Holocene (4,200 ybp to present times) – unconsolidated clay, silt, and gravel recently deposited spread regionally onto alluvial flats.

As described by McLeod (2019:1) the surface deposits within the project area “consist of younger Quaternary Alluvium, derived from alluvial fans deposits from the elevated terrain around the San Andres Rift Zone just to the south [from the Sierra Pelona Mountains].” Furthermore “[t]hese younger Quaternary alluvial deposits usually do not contain significant vertebrate fossils, at least in the uppermost layers,” and the Natural History Museum of Los Angeles County does “not have any vertebrate localities that lie within the project area boundaries...” (McLeod 2019:1).

However, there are nearby localities “from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.” Due east of the southern alignment, along Avenue S from Little Rock east, we have localities LACM 5942-5953 from pipeline excavations in Quaternary Alluvium and older Quaternary sediments that



produced fauna of small vertebrates....” (McLeod 2019:1). “Very shallow excavations in the uppermost few feet of the younger Quaternary Alluvium in the proposed project area may not uncover significant fossil vertebrate remains. Deeper excavations that extend down into older sedimentary deposits, however, may well encounter significant vertebrate fossils” (McLeod 2019:2).

The project scope of replacing and adding utility lines in support of traffic signals, cameras and other infrastructure is not expected to involve deep excavations. Therefore, the potential to encounter significant vertebrate fossils in older sedimentary deposits would be low. Any substantial excavations below the uppermost layers, however, should be closely monitored to quickly and professionally collect any specimens without impeding development. Grading and excavation activities associated with development of the project would cause new subsurface disturbance and could result in the unanticipated discovery of paleontological resources.

In the event of an unexpected discovery, implementation of mitigation measure **CUL-1** (refer to **Section 4.5** above) and **GEO-1** would ensure paleontological resources or unique geologic features are not significantly affected. Impacts in this regard would be mitigated to less than significant levels, with implementation of required mitigation measures.

Mitigation Measure

MM GEO-1 Any substantial excavations below the uppermost sediment layers shall be closely monitored by an on-call paleontologist. If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain onsite for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.

Level of Significance with Mitigation

With implementation of mitigation measure **CUL-1** and **GEO-1** above, potential impacts related to paleontological resources would be less than significant.



4.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

4.8.1 GHG Constituents

Greenhouse gases (GHG) are defined under the California Global Warming Solutions Act of 2006 (AB 32) as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Associated with each GHG species is a “global warming potential” (GWP), which is defined as the ratio of degree of warming to the atmosphere that would result from the emission of one mass unit of a given GHG compared with one equivalent mass unit of CO₂ over a given period of time. By this definition, the GWP of CO₂ is always 1. The GWPs of methane and nitrous oxide are 25 and 298, respectively (IPCC, 2007b). “Carbon dioxide equivalent” (CO₂e) emissions are calculated by weighting each GHG compound’s emissions by its GWP and then summing the products.

Carbon dioxide (CO₂) is a clear, colorless, and odorless gas. Fossil fuel combustion is the main human-related source of CO₂ emissions; electricity generation and transportation are first and second in the amount of CO₂ emissions, respectively. Carbon dioxide is the basis of GWP, and thus has a GWP of 1.

Methane (CH₄) is a clear, colorless gas, and is the main component of natural gas. Anthropogenic sources of CH₄ are fossil fuel production, biomass burning, waste management, and mobile and stationary combustion of fossil fuel. Wetlands are responsible for most of the natural methane emissions (USEPA, 2011). As mentioned above, CH₄, within a 100-year period, is 25 times more effective in trapping heat than is CO₂.

Nitrous oxide (N₂O) is a colorless, clear gas, with a slightly sweet odor. N₂O has both natural and human-related sources, and is removed from the atmosphere mainly by photolysis or breakdown by sunlight, in the stratosphere. The main human-related sources of N₂O in the United States are agricultural soil management (synthetic nitrogen fertilization), mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production (USEPA, 2010).



Nitrous oxide is also produced from a wide range of biological sources in soil and water. Within a 100-year span, N₂O is 298 times more effective in trapping heat than is CO₂ (IPCC, 2007a).

4.8.2 Climate Action Plans

The project was evaluated against the Palmdale Energy Action Plan (PEAP) (City of Palmdale, 2011). The PEAP's purpose is to "identify how the City will use energy efficiency and independence strategies to achieve its GHG emission reduction target of 15% by the year 2020 consistent with the State's overall target to reduce GHG emissions statewide to 1990 levels by 2020" (City of Palmdale, 2011). The PEAP "provides goals and measures focused on energy use, water use, transportation, land use, and solid waste to reduce GHG emissions wherever possible while enhancing the local economy and reducing reliance on inefficient energy imports" (City of Palmdale, 2011).

The PEAP established a baseline inventory of GHG emissions produced from government operations and community-wide activities in city limits in 2005. The City emitted approximately 948,258 metric tons of carbon dioxide equivalent (MTCO_{2e}) within city limits, with the transportation sector contributing the most (40% of total) and the commercial and industrial sector contributing another 30%. The residential sector contributed almost as much with 27%.

Emissions from City government operations and facilities produced approximately 5,589 MTCO_{2e} in 2005, with buildings and facilities contributing 55% of the total. Another 14% came from the City's vehicle fleet, while employee commute and streetlights and traffic signals both contributed 10% each.

To achieve the reduction target of 15% below 2005 baseline levels by 2020, the City established several community-wide and City operation reduction strategies, summarized below:

- *Goal 1:* Reduce energy demand through energy conservation and efficiency.
- *Goal 2:* Reduce water consumption for energy conservation.
- *Goal 3:* Promote renewable energy generation and use.
- *Goal 4:* Reduce transportation emissions through alternative vehicles, trip reduction and consolidation, and efficient flow.
- *Goal 5:* Implement smart land use to reduce vehicular trips.
- *Goal 6:* Reduce waste.
- *Goal 7:* Support the "buy-local" movement.



4.8.3 Thresholds of Significance

It is widely recognized that no single project could generate enough GHG emissions to noticeably change the global climate temperature. However, the combination of GHG emissions from past, present, and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether they would result in a cumulatively significant impact on global climate change.

The AVAQMD CEQA Guidance (AVAQMD, 2016) has determined the threshold of significance for CO_{2e} is 100,000 tons per year (90,720 metric tons per year) or 548,000 pounds per day.¹⁵

- a) **Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Less than Significant Impact

As discussed in § 15064.4 of the CEQA Regulations, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in § 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.

Due to the type of project (i.e. Intelligent Transportation System [ITS] infrastructure expansion), it was determined that emissions from the construction activities related to the project would be more appropriately estimated by using quantitative methodologies presented in existing models, including CalEEMod, the California Emissions Estimator Model (CAPCOA, 2017), and methodologies presented by USEPA, ARB, and other agencies, than by running emissions models. Detailed calculations are presented in **Appendix B**.

The project's construction activity includes extending the existing fiber optic interconnect on Avenue R from 40th Street East to 70th Street East and extending the existing interconnect on Avenue S from 55th Street East to 60th Street East. These extensions will be in the form of an underground cable system created using directional boring.

Additionally, the project proposes to make improvements to several main intersections that will include construction of new traffic signals at Avenue R at 65th East (AR/65); Avenue R at 70th East (AR/70); and Avenue S at 60th East (AS/60). All three intersections also include asphalt improvements; two intersections include concrete work; and one intersection will include a guardrail barricade and an asphalt dike.

The primary source of GHG emissions would come from the exhaust of offroad construction equipment needed to complete these tasks.

¹⁵ See Table 4.3-3 in Section 4.2.



Table 4.8-1 shows the resultant construction GHG emissions from each activity in pounds per day total tons. These demonstrate that, even though the separate activities would probably be sequential and not overlap, the worst-case scenario of all four activities occurring simultaneously, the project would not exceed AVAQMD regional thresholds. Therefore, the project’s GHG impacts would be less than significant.

**Table 4.8-1
TOTAL REGIONAL CONSTRUCTION EMISSIONS**

Construction Activity	CO ₂ e Emissions	
	Annual (tons)	Daily (pounds)
Fiber Optic Installation	21.71	1,422
Avenue R/65 th Street Improvements	4.75	1,401
Avenue R/70 th Street Improvements	4.59	1,348
Avenue S/60 th Street Improvements	4.89	1,580
Grand Total	35.9	5,751
<i>AVAQMD Significance Thresholds</i>	<i>100,000</i>	<i>548,000</i>
Significant (Yes or No)	No	No

b) **Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

Less than Significant Impact

The project’s purpose is to enable the City to further expand on its capability of monitoring and controlling the operations of all City traffic signals. Any future signal synchronization that can interface with the traffic management center will aid in monitoring and improving traffic flow. The monitoring and control function will expand on the future interjurisdictional data sharing component to allow the implementation of arterial traffic management strategies, such as cooperative efforts in developing timing plans and coordinating responses to incidents.

These improvements to traffic flow are help the City meet Goal 4 of the Palmdale Energy Action Plan (PEAP), discussed in **Section 4.8.2**, which lists “efficient flow” as a means of reducing GHG emissions from transportation. Furthermore, the project does not conflict with any of the other community-wide and City operation reduction strategies of the PEAP, it would be compatible with applicable Climate Action Plan strategies and goals. Therefore, impacts would be less than significant.



4.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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	
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	
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
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 or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to the risk of loss, injury, or death involving wildland fires?			X	



- a) **Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Less than Significant Impact

The project involves the expansion of ITS infrastructure. There are no known current or proposed future operations that would involve the routine transport, use, or disposal of hazardous materials or hazardous wastes that may create a significant hazard to the public or environment. Compliance with applicable laws and regulations during construction and operation would ensure that impacts associated with routine transport, use, or disposal of hazardous materials, are less than significant.

- 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?**

Less than Significant Impact

The project construction activities would involve transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with requirements of the Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Occupational Safety and Health Administration (OSHA); California hazardous waste control law;¹⁶ California Division of Safety and Health (DOSH); South Coast Air Quality Management District (SCAQMD); County of Los Angeles Public Health Agency - Department of Environmental Health (DEH); and Los Angeles County Fire Department requirements. Compliance with applicable laws and regulations during project construction and operation would ensure that impacts associated with upset or accident conditions which could cause a release of hazardous materials into the environment are less than significant.

- c) **Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Less than Significant Impact

Quail Valley Elementary School is next to the north side of the project site segment on Avenue S East, and Shadow Hills Middle School abuts the north side of Quail Valley Elementary School approximately 650 feet north of Avenue S East. As previously discussed, project construction activities and future operations would not use significant quantities of hazardous materials or generate significant quantities of hazardous wastes. The project would be required to comply with applicable federal, state and local laws and

¹⁶ Codified in California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control.



❖ SECTION 4.9 - HAZARDS AND HAZARDOUS MATERIALS ❖

regulations pertaining to the transport, use, disposal, handling, and storage of hazardous waste to reduce the likelihood and severity of accidents during transit. Therefore, impacts on existing schools within 0.25 mile of the project site would be less than significant.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

No Impact

Government Code § 65962.5 requires the Department of Toxic Substances Control (DTSC) to compile and update, at least annually, lists of the following:

- Hazardous waste and substances sites from the DTSC EnviroStor database.
- Leaking Underground Storage Tank (LUST) sites by county and fiscal year in the State Water Resources Control Board (SWRCB) GeoTracker database.
- Solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside waste management units.
- SWRCB Cease and Desist Orders (CDOs) and Cleanup and Abatement Orders (CAOs).¹⁷
- Hazardous waste facilities subject to corrective action pursuant to § 25187.5 of the Health and Safety Code, identified by DTSC.¹⁸

These lists are collectively referred to as the “Cortese List.” The above-described listings do not identify the project site or any property within one-quarter mile of the project on the Cortese List.^{19, 20} Therefore, no impacts would occur.

- 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 or excessive noise for people residing or working in the project area?**

No Impact

Airport Land Use Commissions (ALUC). ALUCs have been established for all counties with public use airports in California. ALUCs are formed with the specific intent of

17 CDOs and CAOs may be issued for discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials.

18 If corrective action is not taken on or before the date specified in a CDO or CAO, or if immediate corrective action is necessary to remedy or prevent an imminent substantial danger to the public health, domestic livestock, wildlife, or the environment, the DTSC may take, or contract for corrective action and recover the cost for a responsible party.

19 DTSC, EnviroStor, 2019. Website: <http://www.envirostor.dtsc.ca.gov/public/>, accessed in July 2019.

20 CWRCB, GeoTracker, 2019. Website: <http://geotracker.waterboards.ca.gov>, accessed in July 2019.



❖ SECTION 4.9 - HAZARDS AND HAZARDOUS MATERIALS ❖

implementing state law (Public Utilities Code) regarding airports and surrounding land use compatibility. California requires ALUCs to adopt plans to: (1) coordinate planning for the areas surrounding public use airports to protect public health, safety and welfare by ensuring the orderly expansion of airports; (2) adopt measures that minimize public exposure to excessive noise and safety hazards; (3) identify airport activities which may adversely affect adjacent areas; and (4) identify nearby land use which may interfere with airport operations. ALUCs have the authority to review and make recommendations, but do not have jurisdiction over airport operations.²¹

Airport Land Use Compatibility Plan (ALUCP). An ALUCP is a planning document that contains policies for promoting safety and compatibility between public use airports and the communities that surround them.

Airport Influence Area (AIA). An AIA is the area in which current or future airport-related noise, overflight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. It includes airport owned property, Runway Protection Zones (RPZs), inner and outer safety zones and community noise equivalent level (CNEL) contours. According to Section 1.3.2 (page 25) of the State Airport Land Use Planning Handbook, "The planning boundary of the ALUCP is the 'airport influence area,' and is established by the ALUC after a hearing and consultation with the involved agencies (PUC Section 21675 (c))."

The project is not located within the boundary of an AIA, or within two miles of a public airport or public use airport.²² For these reasons, the project would not expose people to safety hazards due to proximity to a public airport, and no impacts are anticipated.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact

Avenues R and S are identified as evacuation routes according to the City General Plan Exhibit S-1.²³ For construction of the proposed project, traffic control will be needed to temporarily reduce available lanes during the construction of the ITS infrastructure and street resurfacing. Full road closures are not anticipated, however. In addition, a traffic control plan will be prepared to accommodate this work area width along the project route. These impacts would be short term and temporary and would have a less than significant impact on roadways utilized for emergency purposes.

21 California Public Utilities Code §§ 21670to 21679.5.

22 City of Palmdale, Palmdale General Plan Safety Element, Exhibit S-17, Air Installation Compatibility Land Use Zones. 1993.

23 City of Palmdale, Palmdale General Plan Safety Element, Exhibit S-1, Evacuation Routes. 1993.



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- g) **Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?**

Less than Significant Impact

Wildfire hazards areas exist within the southern and western portions of the City's Planning Area.²⁴ However, the project site is not located within a High Fire Hazard Zone.²⁵

The proposed project is located in a developed area that is presently afforded fire protection and emergency medical services. Therefore, impacts associated with significant risk of loss, injury or death involving wildland fires would be less than significant.

24 City of Palmdale, Palmdale General Plan Safety Element, page S-35. 1993.

25 City of Palmdale, Palmdale General Plan Safety Element, Exhibit S-16, Wildfire Hazard Zones. 1993.



4.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:			X	
(i) result in substantial erosion or siltation onsite or offsite?				
(ii) substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?			X	
(iii) create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
(iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact

The project site is developed with a mix of impervious surfaces, including asphalt and concrete. The stormwater runoff generated on the project site is collected in the City storm drain system found along the project’s streets.



Development of the proposed project may result in two types of water quality impacts: (1) short-term impacts due to construction related discharges; and (2) long-term impacts from operation or changes in site runoff characteristics. Runoff may carry on-site surface pollutants to water bodies such as lakes, streams and rivers that ultimately drain to the ocean. Projects that increase urban runoff may indirectly increase local and regional flooding intensity and erosion.

Construction projects typically expose soil to erosion and may temporarily alter drainage patterns. Storm water runoff during construction may contain soil amendments such as fertilizers and pesticides, entrained soil, trash, waste oil, paints, solvents and other substances used during construction. Section 402 of the federal Clean Water Act requires dischargers of potential pollutants into Waters of the United States (WOUS) to: (1) implement best management practices (BMPs) to eliminate or reduce point and non-point source discharges of pollutants; and (2) if one acre or more of soil is disturbed during construction, to prepare a site-specific Storm Water Pollution Prevention Plan (SWPPP) to protect human health and the environment, and obtain a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits establish enforceable limits on discharges, require effluent monitoring, designate reporting requirements, and require construction and post-construction BMPs to eliminate or reduce point and non-point source discharges of pollutants.

Since the construction area of the project site exceeds one acre, a NPDES permit is required from the State Water Resources Control Board. In addition to implementing erosion and sediment control BMPs, the proposed project would be required to develop and implement a SWPPP during construction activities. Implementation of BMPs and the SWPPP during construction would minimize waste discharge from the site and reduce potential impacts to water quality. For these reasons, potential violations of water quality standards or waste discharge requirements would be less than significant during project construction. The project does not propose relocation of any storm drains.

During operation of the proposed project, stormwater runoff conditions are expected to be the same as existing conditions, and therefore, no significant impacts are anticipated.

- b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

Less than Significant Impact

The project site has been previously graded and paved. The proposed project would not increase the amount of impervious surfaces over existing conditions. In addition, operation of the proposed project would not result in additional water demand. Therefore, the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that a net deficit in aquifer volume or a lowering of the local groundwater table level would occur. Therefore, impacts due to project implementation are anticipated to be less than significant.



- c) **Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:**
- i) **Result in substantial erosion or siltation on site or off site?**
 - ii) **Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?**
 - iii) **Create or contribute runoff water that 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?**

Less than Significant Impact

The project site has been previously graded and paved. An existing network of storm drains is present in portions of Avenue R East and Avenue S East within the project site. The project would involve soil disturbance in limited areas within existing roadways and parkways. Due to the project size and the existing storm drain systems in the adjacent streets, implementation of the project is not expected to substantially alter the existing drainage pattern, substantially increase surface runoff in a manner that would result in flooding on or off site or create or contribute substantial runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. With the use of BMPs and compliance with the SWPPP, the project would reduce the potential for substantial erosion or siltation on or off site. The City of Palmdale would comply with all regulations regarding drainage and water quality. The project does not propose installation of new storm drains or relocation or replacement of existing storm drains. The drainage system in and near the project site would be the same at project completion as it is currently. Adherence to the City's recommendations and requirements would result in less than significant impacts.

- d) **Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

No Impact

The project site is in Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Zone X (Refer to **Figure 4.9-1**), which is outside the 100-year flood zone (Panel 06037C0700F).²⁶ FIRM Zone X containing the project site is characterized as moderate to low risk areas for FEMA flood hazard zones. Flood Zone X identifies "areas outside the one percent annual chance floodplain, areas of one percent annual chance sheet flow flooding where average depths are less than one foot, areas of one percent annual

26 Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, City of Palmdale, California, Map Number 06037C0700F, Effective Date September 26, 2008.



❖ SECTION 4.10 - HYDROLOGY AND WATER QUALITY ❖

chance stream flooding where the contributing drainage area is less than one square mile, or areas protected from the one percent annual chance flood by levees.”

A seiche is an oscillating wave in a closed or partially closed water body such as a river, lake, reservoir, pond, and other large inland water body caused by wind, tidal forces, earthquakes, landslides and other phenomena. Tsunamis are long wave-length, earthquake-generated ocean waves. The project site is located over 45 miles inland of the Pacific Ocean and approximately four miles northeast of Lake Palmdale.²⁷ Inundation by seiche or tsunami is not expected to occur because the Proposed Project is not located nearby a coastline and not within the inundation area of Lake Palmdale.²⁸ As such, there is no potential for exposure of the project site to a flood hazard, seiche or a tsunami and no impacts are anticipated.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact

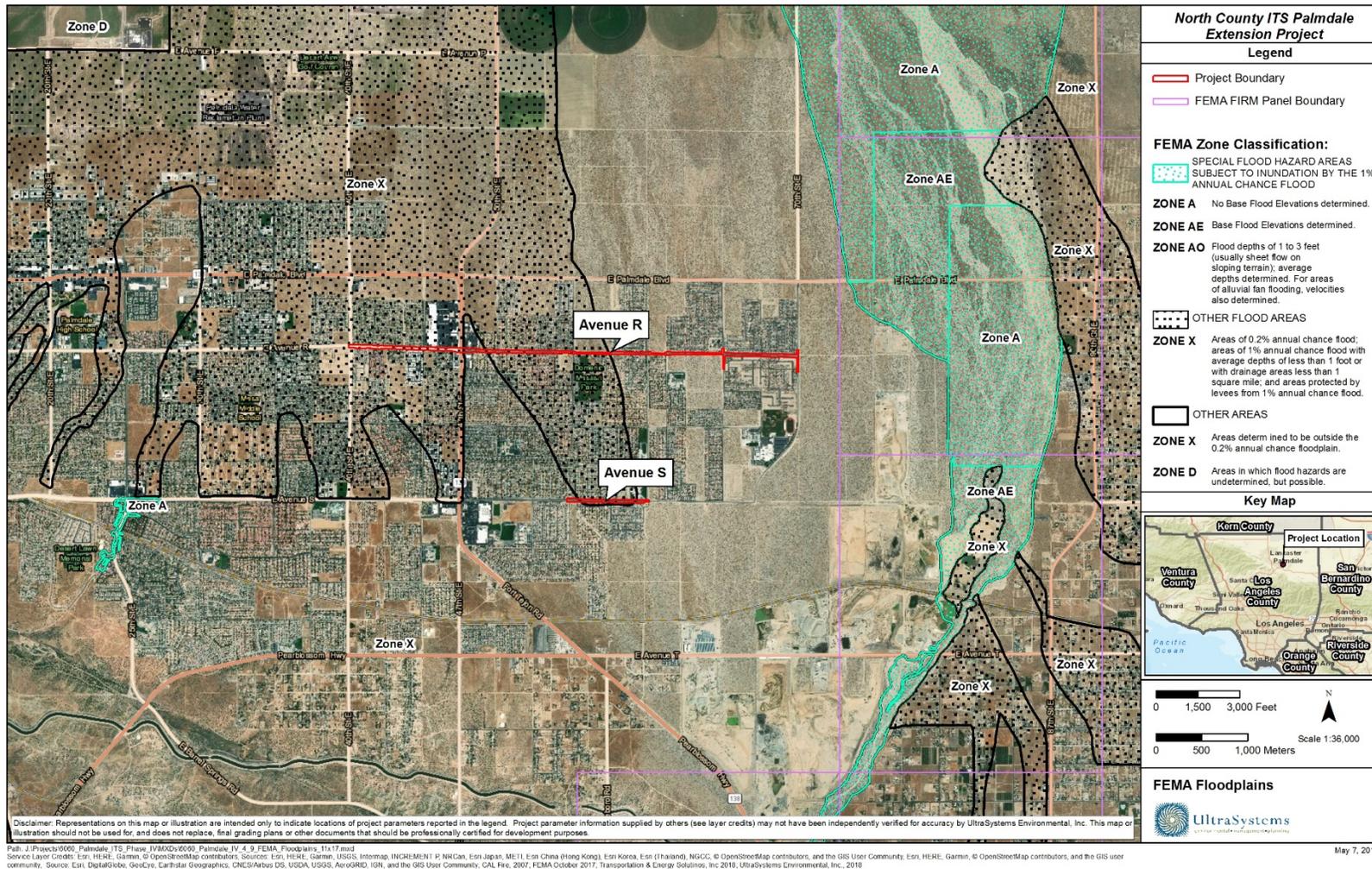
The Proposed Project site is within the Los Angeles County Waterworks District No. 40, Antelope Valley. A 2015 Urban Water Management Plan was prepared for District 40.²⁹ The Proposed Project does not include activities that could obstruct the future water projects. Impacts would be less than significant.

27 Google maps, June, 30, 2019.

28 Los Angeles County Waterworks Districts (LACWD), 2015 Urban Water Management Plan for District 40, February 2017.

29 Google maps, June, 30, 2019.

**Figure 4.10-1
FEMA FIRM MAP PANEL**





4.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

a) Would the project physically divide an established community?

No Impact

The proposed project includes construction of fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals within two project areas, which include portions of Avenue R and Avenue S, east of State Route 14 (SR 14). All construction activity will be performed within rights-of-way of existing public streets. The project would utilize existing roadways, and would not change the locations of existing roadways and would not permanently change access from those roadways to surrounding properties. Therefore, the proposed project would not physically divide an established community and no impacts would occur.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact

The proposed project includes construction of fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals within two project areas, which include portions of Avenue R and Avenue S, east of State Route 14 (SR 14). All construction activity will be performed within rights-of-way of existing public streets. The land uses onsite at project completion would remain public roadway rights-of-way.

The proposed project would not change land uses or permitted uses along the affected segments of Avenue R East and Avenue S East; and, thus, would not conflict with land use plans, policies, or regulations, and no impact would occur.



4.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	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	
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	

- a) **Would the project 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?**
- b) **Would the project 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?**

Less than Significant Impact

The City of Palmdale recognizes the economic value of mining areas and facilities within its borders. Regulation allows these facilities to co-exist with other land uses and reduces negative impacts that can be associated with mining operations.

Potential impacts to mineral resources in the vicinity of the project site were evaluated by reviewing:

- (1) The Environmental Resources Element of the City of Palmdale General Plan (City of Palmdale, 1993).
- (2) The California Department of Conservation Surface Mining and Reclamation Act of 1975 (SMARA) Mineral Land Classification Map for County of Los Angeles – North Half (California Department of Conservation, 1994).
- (3) The California Department of Conservation Division of Oil, Gas, & Geothermal Resources (DOGGR), Well Finder (California Department of Conservation, 2018).
- (4) The United States Geological Survey (USGS) online Mineral Resources Data System (USGS, 2018).
- (5) The Division of Mine Regulation (DMR) Mines Online map (DMR, 2020).



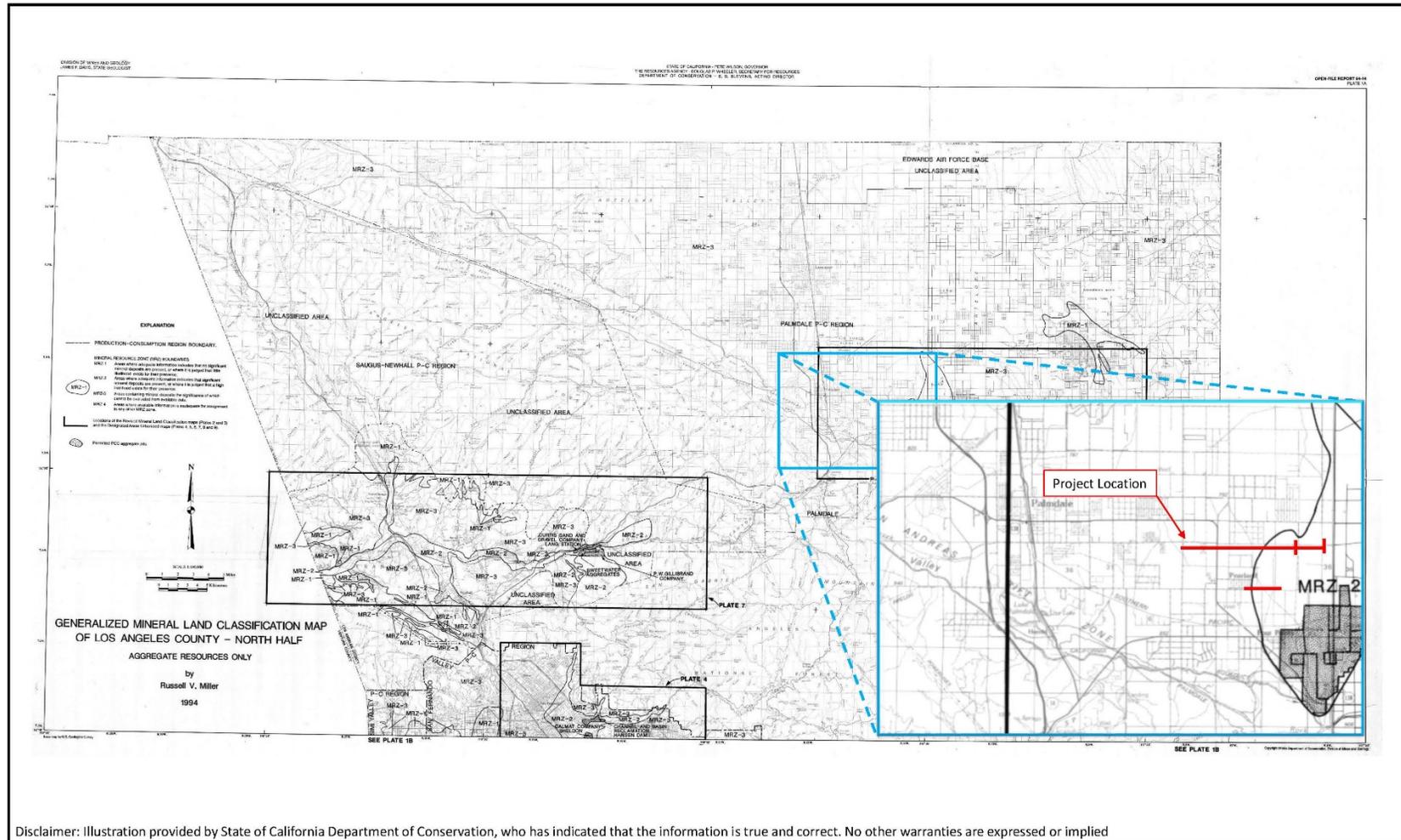
❖ SECTION 4.12 - MINERAL RESOURCES ❖

Approximately the eastern half of the project site segment along Avenue R East, and nearly the entire portion of the project site along Avenue S East, are mapped within Mineral Resource Zone 2 (MRZ-2), that is, areas where adequate information indicates that significant mineral resources are present or it is judged that such resources are highly likely to be present. The balance of the project site is mapped in MRZ-3, that is, areas containing mineral deposits where the significance of which cannot be evaluated from available data, by the California Geological Survey (see Figure 4.12-1) (CGS 1995). No mining sites are present on or next to the project site.

The active Palmdale sand and gravel mine is approximately two miles east of the project site aligned with S Avenue East. The aggregate being extracted there is important to the construction industry in the Antelope Valley and greater Los Angeles area. In accordance with state policy, the City of Palmdale has established policies that will assure continued access to these mineral resources, ensure that development occurring in the vicinity of mining operations is adequately buffered from any adverse effects of the mining operations, and that the extraction and processing of these mineral resources occurs without competition from other incompatible land uses. The Mineral Resource Extraction (MRE) district has been designated on the City's Land Use Map to assist in recognizing and permitting extraction of mineral resources. The MRE District is approximately 0.5 mile east of the project site on R Avenue East and 0.7 mile east of the project site on S Avenue East. Proposed project implementation would not affect mining or land use compatibility regarding mining within the MRE District. Installation of the proposed traffic signals and other improvements would not affect land use compatibility respecting potential future mining in areas of vacant land abutting the project site. Proposed project implementation would not cause a loss of availability of known mineral resources.

No active mapped oil or gas wells are within approximately one mile of the project site. Therefore, less than significant impacts are anticipated to: (1) the availability of known mineral resources of value to the region or state residents, or (2) a locally important mineral resource recovery site delineated on a local general, specific, or other land use plan.

**Figure 4.12-1
MINERAL RESOURCE ZONES (MRZ)**





4.13 Noise

Would the project result in:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	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		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
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

4.13.1 Noise Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The decibel (dB) scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Because the human ear is not equally sensitive to all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against upper and lower frequencies in a manner approximating the sensitivity of the human ear. The scale is based on a reference pressure level of 20 micropascals (zero dBA). The scale ranges from zero (for the average least perceptible sound) to about 130 (for the average human pain level).

Several rating scales have been developed to analyze adverse effects of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people depends largely upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:



- L_{eq} , the equivalent noise level, is an average of sound level over a defined time period (such as 1 minute, 15 minutes, 1 hour or 24 hours). Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.
- L_{90} is a noise level that is exceeded 90 percent of the time at a given location; it is often used as a measure of “background” noise.
- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 4.77-A-weighted decibel (dBA) “penalty” added to noise during the hours of 7:00 p.m. to 10:00 p.m., and a 10-dBA penalty added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime (Caltrans, 2009). The logarithmic effect of these additions is that a 60-dBA 24-hour L_{eq} would result in a calculation of 66.7 dBA CNEL.
- L_{dn} , the day-night average noise, is a 24-hour average L_{eq} with an additional 10-dBA “penalty” added to noise that occurs between 10 p.m. and 7 a.m. The L_{dn} metric yields values within 1 dBA of the CNEL metric. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment.

4.13.1 Existing Noise in the Project Area

According to the Noise Element of the 1993 City of Palmdale General Plan (City of Palmdale, 1993e), the City of Palmdale has noise levels typical of urban residential communities. Other noise sources include aircraft operations at the combination of U.S. Air Force Plant 42 and Palmdale Regional Airport, which is about four miles from the nearest project area, and freight railroad operations, which are about 0.8 mile away.

While the 1993 General Plan Noise Element (discussed in **Section 4.13.4**) presents ambient noise measurement data for many areas of the city, none were reported for the project area. On October 15, 2019, UltraSystems conducted a limited ambient noise survey at four intersections where noise-generating construction equipment will be used. At each site, samples were taken once in the morning and once in the afternoon. Only short-term (15-minute) measurements were made, because sensitive receivers such as residences will be exposed to noise for brief intervals during construction. Long-term (operational) exposures will be negligible, so it was not necessary to obtain, for example, 24-hour data for calculation of CNEL.

A Quest SoundPro Model DL-1-1/3 ANSI Type 1 sound level meter was used in the “slow” mode at each measurement location to obtain a 15-minute average sound level (L_{eq}), as well as other metrics. The meter’s microphone was maintained five feet above the ground. Noise meter output records and observations during sampling are in the noise technical report for this project, which is provided as **Appendix F**. Results are shown in **Table 4.13-1**. Site ID numbers in parentheses represent afternoon samples.



❖ SECTION 4.13 - NOISE ❖

L_{eq} levels are typical for residential neighborhoods on or near busy streets. Except at measurement site 1 (5/A), afternoon values are slightly higher than morning ones. The same is true for the L_{90} metric, which represents “background noise” in the area.



**Table 4.13-1
MEASURED AMBIENT NOISE LEVELS**

Site ID	Project Site	Monitoring Address	Monitoring Latitude Longitude	Nearby Sensitive Receivers	Sampling Interval	Sound Level, dBA		
						L _{eq}	L _{max}	L ₉₀
1	Ave S/60 th E	37236 58 th Street E	N 34.559543 W 118.022906	Quail Valley Elementary School	0949 - 1004	61.3	75.6	52.9
5 (1A)	Ave S/60 th E	37236 58 th Street E	N 34.559543 W 118.022906	Quail Valley Elementary School	1324 - 1329	58.0	75.2	45.3
2	Ave S/60 th E	37155 Cannon Court	N 34.557708 W 118.023385	Residences, Quail Valley Elementary School	1007 - 1022	58.8	70.7	44.8
6 (2A)	Ave S/60 th E	37155 Cannon Court	N 34.557708 W 118.023385	Residences, Quail Valley Elementary School	1344-1359	62.8	75.9	54.3
3	Ave R/70 th E	38008 Aidea Street	N 34.572452 W 118.005189	Residences	1043 - 1058	58.9	75.8	38.6
7 (3A)	Ave R/70 th E	38008 Aidea Street	N 34.572452 W 118.005189	Residences	1407 - 1422	62.3	80.7	45.1
4	Ave R/65 th St	6514 Lasseron Drive	N 34.572622 W 118.013730	Residences	1105 - 1120	62.0	86.8	42.2
8 (4A)	Ave R/65 th St	6514 Lasseron Drive	N 34.572622 W 118.013730	Residences	1427 - 1442	63.1	79.5	53.5



4.13.2 Sensitive Land Uses

The Palmdale General Plan Noise Element identifies sensitive land uses as “residential (single and multi-family dwellings, mobile home parks, dormitories, and similar uses); transient lodging (including hotels, motels, and similar uses); hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; public or private educational facilities, libraries, churches, and places of public assembly.”(City of Palmdale, 1993e) The City of Palmdale Municipal Code § 17.16.210 (U) defines “sensitive use” as “any residential use, public or private school, day care, playground, and retirement facility.”³⁰

The principal existing sensitive receivers near the project are single family residences, which line both sides of Avenue R and Avenue S. The only other sensitive receiver identified is Quail Valley Elementary School, which is on the northwest corner of Avenue S and 620th Street East, one of the project intersections.

4.13.2 Regulatory Setting

The primary regulatory documents that establish noise standards within the city of Palmdale are the City of Palmdale General Plan Noise Element and the Palmdale Municipal Code (PMC) (City of Palmdale, 2019). An update to the 1993 General Plan, called “Palmdale 2045, a complete community,” is under development.³¹ However, because the update has not been updated by the City, the 1993 version will be relied upon for this report.

The Noise Element of the City of Palmdale’s 1993 General Plan has two goals:

- **Goal N1:** Minimize the exposure of residents to excessive noise to the extent possible, through the land planning and the development review process.
- **Goal N2:** Promote noise compatible land uses within the 65 CNEL contour and the Frequent Overflight Area of Air Force Plant 42.

Air Force Plant 42, which shares a runway with the Palmdale Regional Airport, is about 3.5 miles northwest of the project, at its closest point. Therefore, Goal N2 is irrelevant to the project and will not be discussed further.

The Noise Element contains numerous objectives and policies to attain Goal N1, most of which pertain to land use issues. The project, however, does not include a change in nature or size of a land use, and will not be a long-term noise source. Only the following Plan provisions are relevant:

30 City of Palmdale Municipal Code (PMC) § 17.16.210 (U).

31 City of Palmdale, General Plan Update. Internet: <http://www.cityofpalmdale.org/634/General-Plan-Update>. Accessed August 19, 2019.



Policy N1.2.2: Restrict construction hours during the evening, early morning and Sundays.

Policy N1.2.3: Utilize any or all of the following measures in order to maintain acceptable noise environments throughout the City:

- Control of noise at its source, including noise barriers and other muffling devices built into the noise source.
- The provision of buffer areas and/or wide setbacks between the noise source and other development.

The construction noise provisions of the City of Palmdale Municipal Code are in Title 8 – Health and Safety, Chapter 8.28 Building Construction Hours of Operation and Noise Control. The main limitation on construction noise is that “no person shall perform any construction or repair work on any Sunday, or any other day after 8:00 p.m. or before 6:30 a.m., in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park.”³² The Palmdale Municipal Code does not specify any quantitative noise exposure limits.

4.13.3 Discussion of Impacts

- 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**

Less than Significant Impact with Mitigation

Construction

Noise impacts from construction activities are a function of the noise generated by the operation of construction equipment and on-road delivery and worker commuter vehicles, the location of equipment, and the timing and duration of the noise-generating activities. For the purpose of this analysis, it was estimated that the construction of the proposed project would begin in early spring, 2021 and would last approximately four months.³³

The types and numbers of pieces of equipment anticipated in each phase of construction and equipment installation were estimated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (CAPCOA, 2017) and UltraSystems’ experience with similar projects. Details of the equipment assumptions are provided in **Appendix B** of this Initial Study.³⁴

32 City of Palmdale Municipal Code (PMC) § 8.28.030.

33 Email from Glen Pedersen, Transportation Engineering Solutions, to Michael Rogozen, UltraSystems Environmental, Irvine, CA. October 14, 2019.

34 Appendix B, Air Quality and GHG Emissions Data and Calculations



Table 4.13-2 lists the equipment expected to be used. For each equipment type, the table shows an average noise emission level (in dB at 50 feet, unless otherwise specified) and a “usage factor,” which is an estimated percentage of operating time that the equipment would be producing noise at the stated level.³⁵ Equipment use was matched to phases of the construction schedule. The last column of the table shows the composite noise at 50 feet for each phase; i.e., the total noise if all of each phase’s equipment were to operate simultaneously.

The noise emission level for the horizontal directional drilling (HDD) equipment is somewhat uncertain. A review of online literature found numerous reports on measurement of noise from this equipment, but information on the reference distance for the result was always missing. For this report, reference noise levels and distances for HDD equipment were back calculated from results of noise modeling for a natural gas pipeline project (Millennium Pipeline Company, 2015).

Using calculation methods published by the Federal Transit Administration, UltraSystems estimated the average hourly exposures at three locations at or near where ambient measurements were made. To account for the fact that at any given time the various pieces of construction equipment are at different places, the distances used for the calculation were those from the center of each construction area to each receiver point. Only three calculations were performed because the types of land uses and the distances between noise sources and receivers is highly similar throughout the project area.

Almost all of the residences along Avenue R and Avenue S have an approximately five-foot-tall brick wall between them and the sidewalk. The Fresnel number method (Foss, 1978) was used to estimate the wall’s noise attenuation.³⁶ It was determined that the existing walls would provide about 7.5 dB of attenuation.

35 Equipment noise emissions and usage factors are from Knauer, H. et al., 2006. FHWA Highway Construction Noise Handbook. U.S. Department of Transportation, Research and Innovative Technology, Administration, Cambridge, Massachusetts, FHWA-HEP-06-015 (August 2006), except where otherwise noted.

36 Wall attenuation calculations are in the noise technical report in Appendix F.



**Table 4.13-2
CONSTRUCTION EQUIPMENT NOISE CHARACTERISTICS**

Construction Phase	Equipment Type	Maximum Sound Level (dBA @ 50 feet)	Usage Factor	Composite Noise (dBA @ 50 feet)
Fiber Optic Installation (Avenue R and Avenue S)	Compressor	78	0.4	91.6 (Entry)
	Horizontal Directional Drilling Equipment - Entry	74.2 ^a	N/A ^b	
	Horizontal Directional Drilling Equipment - Exit	63.9 ^a	N/A ^b	84.2 (Exit)
	Tractor/Loader/Backhoe	85	0.37	
Asphalt Paving	Pavers	77	0.5	82.1
	Rollers	80	0.2	
Asphalt Paving and Asphalt Dike	Pavers	77	0.5	82.1
	Rollers	80	0.2	
	Tractor/Loader/Backhoe	85	0.37	
Concrete Paving, Curb and Gutter	Cement and Mortar Mixer	85	0.4	87.8
	Concrete Saw	90	0.2	
	Jackhammer	89	0.2	
	Tractor/Loader/Backhoe	85	0.37	
Guardrail Barricade	Forklift	67	0.2	80.7
	Tractor/Loader/Backhoe	85	0.37	
Signal Lights	Auger Drill Rig	84	0.2	83.9
	Crane	83	0.29	
	Generator Set	73	0.5	
	Tractor/Loader/Backhoe	85	0.37	
	Welder	74	0.45	

^aBack-calculated from Millennium Pipeline Company, 2015; reference distance is 350 feet.

^bUsage factor already accounted for before back-calculation.

Table 4.13-3 shows the average short-term exposure of sensitive receivers to construction noise, taking the barrier into account. For each site analyzed, the *increase* in exposure would, for at least part of construction, exceed the 5-dBA L_{eq} significance threshold defined in Section 5.4 of **Appendix F** (Noise Study). These results are representative of numerous other similar impacts in the project area. However, implementation of mitigation measures described below will ensure that impacts from construction noise will be less than significant.



**Table 4.13-3
ESTIMATED CONSTRUCTION NOISE EXPOSURES AT NEARBY SENSITIVE
RECEIVERS**

Nearest Ambient Measurement Point	Activity	Sensitive Receiver	Distance (feet)	1-Hour L _{eq} (dBA)		
				Existing ^a	Projected ^b	Change
3	HDD (Entry)	Single-family residence	49	60.9	84.2	+23.3
3	HDD (Exit)	Single-family residence	49	60.9	76.9	+16.0
4	Traffic Signal and CCTV	Single-family residence	56	62.6	75.4	+12.8

^aMean of one morning and one afternoon measurement.

^bExisting plus construction-related. Intervening wall is taken into account.

Operation

Noise from the new traffic control equipment will be barely detectable, especially in a traffic noise environment. Therefore, noise from onsite sources would be less than significant. Furthermore, the project is not anticipated to increase or decrease traffic. Therefore, there will be no traffic noise impact.

Mitigation Measures

The following mitigation measures will reduce short-term construction noise impacts to a less than significant level.

MM N-1 If surrounding residents or businesses complain of excessive noise during construction, then the construction contractor will conduct noise monitoring in the residential or commercial area of concern during the suspected noise-producing construction activities. If the monitored noise levels exceed background levels by 5 dBA or more, then the construction contractor will mitigate noise levels using temporary noise shields, noise barriers or other mitigation measures to comply with those restrictions or standards. (See below.)

MM N-2 The construction contractor will use the following **source controls**, except where not physically feasible:

- Use of noise-producing equipment will be limited to the interval from 7 a.m. to 6 p.m., Monday through Friday, which is within a more restrictive time zone than the General Plan guidelines of 6:30 am to 8:00 pm.
- For all noise-producing equipment, use types and models that have the lowest horsepower and the lowest noise generating potential practical for their intended use.



- The construction contractor will ensure that all construction equipment, fixed or mobile, is properly operating (tuned-up) and lubricated, and that mufflers are working adequately.
- Have only necessary equipment onsite.
- Use manually-adjustable or ambient-sensitive backup alarms

MM N-3 The contractor will use the following path controls, except where not physically feasible:

- Install portable noise barriers, including solid structures and noise blankets, between the active noise sources and the nearest noise receivers.
- Temporarily enclose localized and stationary noise sources.
- Store and maintain equipment, building materials, and waste materials as far as practical from as many sensitive receivers as practical.

MM N-4 Advance notice of the start of construction shall be delivered to all noise-sensitive receivers adjacent to the project area. The notice shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints with the contractor and the City.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact

Vibration is sound radiated through the ground. Groundborne noise is the rumbling sound caused by the vibration of building interior surfaces. The ground motion caused by vibration is measured as peak particle velocity (PPV) in inches per second and is referenced as vibration decibels (VdB). Typical outdoor sources of perceptible groundborne vibration are construction equipment and traffic on rough roads.

The American National Standards Institute (1983) indicates that vibration levels in critical care areas, such as hospital surgical rooms and laboratories, should not exceed 0.2 inch per second of PPV. The Federal Transit Administration (FTA) also uses a PPV of 0.2 inch per second as a vibration damage threshold for fragile buildings and a PPV of 0.12 inch per second for extremely fragile historic buildings (Federal Transit Administration, 2018, p. 186). The FTA criteria for infrequent groundborne vibration events (less than 30 events per day) that may cause annoyance are 80 VdB for residences and buildings where people normally sleep, and 83 VdB for institutional land uses with primarily daytime use.



Construction

It is expected that groundborne vibration from project construction activities would cause only intermittent, localized intrusion. The project’s construction activities most likely to cause vibration impacts are:

- **Heavy Construction Equipment:** Although all heavy, mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- **Trucks:** Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps plates in the roadway or potholes. Repairing the bumps and potholes, and immobilizing the temporary plates almost always eliminates the problem.

The project would not include any blasting or pile driving. Given the dense subsurface infrastructure of piping, cables, conduits, and other existing obstructions, drilling will likely be by hand augers or hand excavation. Some demolition of existing concrete structures with concrete saws and/or jackhammers will be required and will be a groundborne vibration source. Other construction equipment such as loaded trucks and small backhoes may temporarily increase groundborne vibration or noise at the project site.

The construction vibration analysis used formulas published by the Federal Transit Administration (2018, p. 185). For a standard reference distance of 25 feet, peak particle velocity is found from:

$$PPV = PPV_{ref} \times (25/D)^{1.5}$$

where

$$PPV_{ref} = \text{Reference source vibration at 25 feet}$$

$$D = \text{Distance from source to receiver}$$

The vibration level (VdB) for a standard reference distance of 25 feet is found from:

$$VdB = L_{vref} - 30 \log(D/25)$$

where

$$L_{vref} = \text{Reference source vibration level at 25 feet}$$

$$D = \text{Distance from source to receiver}$$



The FTA has published standard vibration levels for construction equipment operations, at a distance of 25 feet (Federal Transit Administration, 2018, p. 184). The smallest distance from construction activity to a residential receiver would be about 49 feet. The calculated vibration levels expressed in VdB and PPV for selected types of construction equipment at distances of 25 and 49 feet are listed in **Table 4.13-4**.

Table 4.13-4
VIBRATION LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT

Equipment	PPV at 25 feet (in/sec)	Vibration Decibels at 25 feet (VdB)	PPV at 49 feet (in/sec)	Vibration Decibels at 49 feet (VdB)
Loaded trucks	0.076	86	0.028	77
Jackhammer	0.035	79	0.013	70
Small bulldozer	0.003	58	0.001	49

As shown in **Table 4.13-4**, the vibration level of construction equipment at the nearest sensitive receiver (49 feet) is at most 0.028 inch per second, which is less than the FTA damage threshold of 0.12 inch per second PPV for fragile historic buildings, and 77 VdB, which is less than the FTA threshold for human annoyance of 80 VdB. Construction vibration impacts would therefore be less than significant.

Operations

Operation of the proposed project would not involve significant sources of groundborne vibration or groundborne noise. Thus, operation of the proposed project would result in a less than significant impact.

- 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?**

No Impact

As noted in Section 4.13.2, the combination of U.S. Air Force Plant 42 and Palmdale Regional Airport, is about four miles from the nearest project area. The project would not change the aircraft noise exposures of any residents or workers. Therefore, there will be no noise impact.



4.14 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned 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
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

The city of Palmdale is located in northern Los Angeles County. It covers 104 square miles and has a population of 158,605 and 52,115 residential units (City of Palmdale, 2018a).

a) Would the project induce substantial unplanned 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)?

No Impact

The project proposes construction of fiber optic infrastructure, remote CCTV surveillance, TOC upgrades, traffic signal upgrades, and new traffic signals. The project is located within the City street right-of-way (ROW), with the exception of two areas where new traffic signal installations would require ROW acquisition to construct ultimate curb returns. The project would not include an expansion of roadways that could induce substantial growth. Therefore, the project would not have an adverse effect on population or business growth and no impact would occur.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact

The project would not displace any existing housing units or people. It would not necessitate the construction of replacement housing elsewhere, and no impacts would occur.



4.15 Public Services

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, 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:				
a) Fire protection?				X
b) Police protection?				X
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X

a) Fire protection?

No Impact

The Los Angeles County Fire Department (LACFD) is the primary provider of fire suppression and fire prevention services in the City of Palmdale (County of Los Angeles Fire Department, 2018). Implementation of the proposed project would not adversely affect the City’s existing fire protection services. The project proposes to construct fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals within the city. The fiber optic cable would be installed under paved sidewalks along the north sides of Avenue R East and Avenue S East; installation would not block traffic lanes on the two roadways and would not impact response times via those two roadways. Installation of traffic signals would briefly block traffic lanes for installation of induction loops in the roadway pavement; installation of CCTV cameras would not block traffic lanes. At least one lane in each direction on each roadway would remain open during installation of traffic signals; thus, traffic signal installation would not substantially lengthen Fire Department response times. The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire department facilities. Additionally, the project would not result in the need for new or physically altered fire department facilities. Therefore, the project would have no impact on fire protection services.

b) Police protection?

No Impact

The City of Palmdale contracts with the County of Los Angeles for most emergency services, including the Sheriff’s Department. Palmdale Sheriff’s Station is located at



750 East Avenue Q at the corner of East Avenue Q and Sierra Highway (City of Palmdale Law Enforcement, 2018).

Implementation of the proposed project would not adversely affect the City's existing law enforcement. The project proposes to construct fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals within the city. The fiber optic cable would be installed under paved sidewalks along the north sides of Avenue R East and Avenue S East; installation would not block traffic lanes on the two roadways and would not impact response times via those two roadways. Installation of traffic signals would briefly block traffic lanes for installation of induction loops in the roadway pavement; installation of CCTV cameras would not block traffic lanes. At least one lane in each direction on each roadway would remain open during installation of traffic signals; thus, traffic signal installation would not substantially lengthen Sheriff's Department response times. The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered law enforcement facilities. Additionally, the project would not result in the need for new or physically altered law enforcement facilities. Therefore, the project would have no impact on law enforcement.

c) Schools?

No Impact

The project site is located within the Palmdale School District and the Antelope Valley Union High School District (Palmdale School District, 2018; Antelope Valley Union High School District, 2018). Seven elementary schools and one middle school within the Palmdale School District are located near the project area. Quail Valley Elementary School is next to the north side of the project site along Avenue S East; Shadow Hills Middle School abuts the north side of Quail Valley Elementary School approximately 650 feet north of Avenue S East. Installation of the proposed improvements would not block traffic lanes on Avenue 60 East and would not interfere with student drop off or pick-up traffic to or from either of the schools. The project would not result in a direct increase in a demand for educational facilities. Therefore, the project would have no impacts on schools and would not affect student enrollment or increase the number of students attending any schools.

d) Parks?

No Impact

Domenic Massari Park is located at 37716 55th Street East, adjacent to the project site along East Avenue R. In addition, Yellen Dog Park is located at 5100 East Avenue S, just south of E Avenue S. The City of Palmdale has 18 parks, including community use parks, neighborhood parks, and special use facilities (City of Palmdale, 2018b). The project would not induce population growth and thus would not generate demand for parks; and would not adversely impact recreation and park services. The project would not result in increased park usage nor does it propose any park or recreational facilities. Therefore, no impacts are anticipated.



e) **Other public facilities?**

No Impact

The Palmdale City Library is located at 700 East Palmdale Boulevard to serve the residents of the City. The proposed project would result in no impacts on existing library resources in the City of Palmdale because the proposed street improvements would not affect library services or facilities.



4.16 Recreation

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	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
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

- 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?**

No Impact

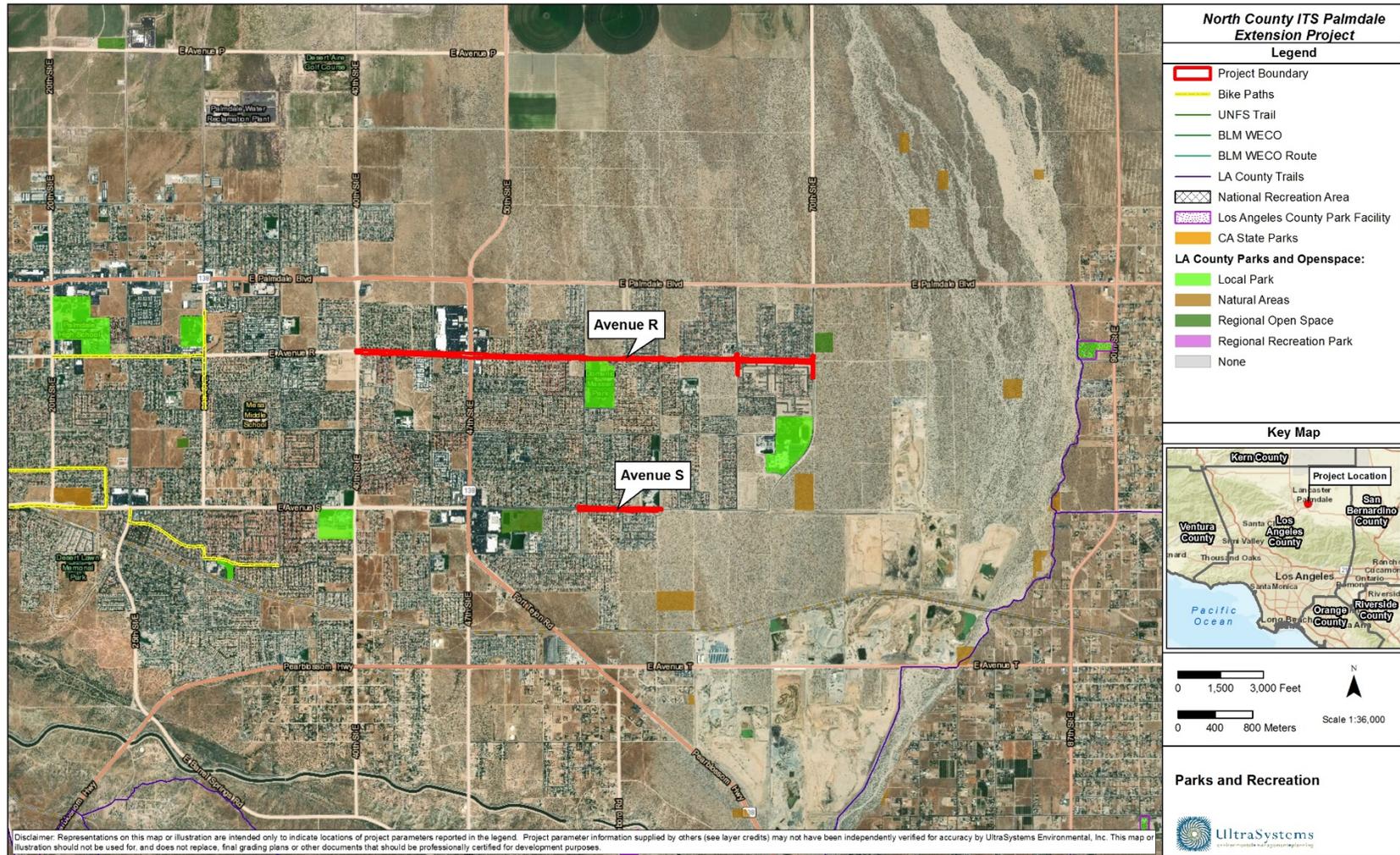
The proposed project would construct fiber optic infrastructure, remote CCTV surveillance, TOC upgrades, traffic signal upgrades, and new traffic signals. The project is within the City street ROW. Refer to **Figure 4.16-1**, which shows the proposed project’s location in relation to nearby parks and recreational facilities. All construction activity will be performed within rights-of-way of existing public streets. The project would not cause an increase in the use of existing parks or recreation facilities. The project would not cause substantial physical deterioration of park or recreational facilities and no impact would occur.

- 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?**

No Impact

The proposed project would construct fiber optic infrastructure, remote CCTV surveillance, TOC upgrades, traffic signal upgrades, and new traffic signals. Therefore, the project does not include recreation facilities and would not result in an expansion of recreation facilities. The project is within the City street ROW and would not have an adverse physical effect on the environment. No impact would occur.

**Figure 4.16-1
NEARBY PARKS AND RECREATIONAL FACILITIES**





4.17 Transportation

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?				X
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
d) Result in inadequate emergency access?			X	

- a) **Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

Less than Significant Impact

Relevant Transportation Plans

Los Angeles County Congestion Management Program

The Los Angeles County Metropolitan Transportation Authority (Metro) is responsible for planning and managing traffic congestion and coordinating regional transportation policies in Los Angeles County. Metro prepared the 2010 Congestion Management Program (CMP) for Los Angeles County. The CMP is intended to provide congestion relief by linking transportation, land use and air quality planning. The goal of the County is to comply with statutory requirements of the CMP, including monitoring Level of Service (LOS) on the CMP Highway and Roadway network, measuring frequency and routing of public transit, implementing the Transportation Demand Management and Land Use Analysis Program Ordinances, and helping local jurisdictions meet their responsibilities under the CMP (Metro, 2010, p.1). The CMP also promotes transportation projects eligible to compete for state gasoline tax funds and develops a partnership among transportation decisionmakers to devise appropriate multimodal transportation solutions (Metro, 2010, p. 6). The project site is located within Metro’s North County Plan area.

The California Government Code Section 65088.3 states that jurisdictions within a county may opt-out of the CMP requirement without penalty, if a majority of local jurisdictions



representing a majority of the County's population formally adopt resolutions requesting to opt-out of the program. On June 28, 2018, the Metro Board of Directors acted to initiate the process to opt-out of the State-mandated program. The Los Angeles County Board of Supervisors opted out of the Congestion Management Program on July 16, 2019.

City of Palmdale General Plan Circulation Element

The City of Palmdale's General Plan Circulation Element (City of Palmdale, 1993) was created to provide a blueprint for construction and maintenance of the City's transportation network which will accommodate growth, support economic development, allow safe and convenient access, and meet regional transportation goals. It addresses the City's plans to upgrade and expand its pedestrian walkways, surface streets, arterial and regional highways, public transportation, rail service and air service (City of Palmdale, 1993, pp. C-1 to C-3). Relevant goals and policies include:

- **GOAL C1:** Establish, maintain and enhance a system of streets and highways which will provide for the safe and efficient movement of people and goods throughout the Planning Area, while minimizing adverse impacts on the community (City of Palmdale, 1993, p. C-2).
 - **Policy C1.1.4:** Periodically monitor levels of service within the existing street network to identify deficient street segments and intersections, and develop programs to improve service levels where needed.
 - **Policy C1.1.5:** Improve the existing street network based upon the adopted Circulation Plan, through implementation of the Capital Improvement Program and through requirements placed upon new development approvals.

The City of Palmdale's Circulation Plan map shows East Avenue R and East Avenue S as Major Arterial roadways (City of Palmdale, 2016). As discussed in **Section 3.0**, the project includes construction of a fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals on portions of Avenue R and Avenue S. The project would improve synchronization and traffic flow and thus would improve service levels on Avenue R and Avenue S. Therefore, the project is consistent with the goals and policies of the City's General Plan Circulation Element.

City of Palmdale 2018 Ten-Year Capital Improvement Plan (CIP)

The City of Palmdale's 2018 Ten-Year Capital Improvement Plan (CIP), which includes projects planned from 2018 to 2028, was approved by the City Council on October 2, 2018. The CIP is comprised of 216 proposed projects divided into five categories; General, Parks and Culture, Streets, Traffic, and Watershed Resources (City of Palmdale, 2018, p. 1). The project is included in the 2018 CIP as Traffic Project TRF-042 Avenue R Signal Synchronization and is described as the expansion of ITS infrastructure on Avenue S between 55th Street and 60th Street and on Avenue R from 40th Street to 70th Street, located in the City of Palmdale. The project would include:



(1) the extension of the existing fiber-optic lines along Avenue R; (2) the construction of new traffic signals; and (3) installation of eight CCTVs (City of Palmdale, 2018, p. 126).

The CIP also includes the following traffic signal projects for Avenue R and Avenue S: TRF-023 Traffic Signal Modification - Avenue R at 47th Street East; and TRF-027 Traffic Signal - Avenue S at 70th Street East. Project TRF-023 would improve traffic operations by modifying the existing traffic signal and project TRF-027 would improve traffic operations by installing a traffic signal and providing intersection widening (City of Palmdale, 2018, pp. 117, 119). At their meeting on September 13, 2018, the Planning Commission reviewed the 2018 Ten-Year Capital Improvement Plan and determined that the plan conforms to the goals, objectives, and policies of the elements of the General Plan (City of Palmdale, 2018, p.1). As discussed in **Section 3.0**, the project includes construction of a fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals on portions of Avenue R and Avenue S. The project would and would increase current and future traffic mobility by relieving traffic congestion on Avenue R and Avenue S. Furthermore, the expansion of the interconnected system would improve traffic signal coordination and shorten travel delays. The project is consistent with the City of Palmdale General Plan Circulation Element because it would improve operation of Avenue R East and Avenue S East, two major arterials designated in the Circulation Element; and would be consistent with the City's Capital Improvement Program because it would improve signal synchronization and traffic flow, and thus relieve congestion, on Avenue R East and Avenue S East.

Transit

Commuter transit services in the City of Palmdale is provided by the Antelope Valley Transit Authority (AVTA) Commuter Bus Service, Amtrak Throughway Bus Service, Greyhound Bus Service, Metrolink Commuter Rail Service, County of Los Angeles Beach Bus, and Santa Clarita Transit (City of Palmdale, 2019a). Local bus service is provided by AVTA, which has several bus routes in the project area and several bus stops along Avenue R and Avenue S. Some of the bus stops along these routes could be temporarily impacted during construction. However, as discussed in **Section 3.4**, a traffic control plan will be prepared to accommodate the work areas. The traffic control plan will address any bus stops in the project work area. Therefore, impacts on transit would be less than significant.

Bicycle and Pedestrian Facilities

Portions of Avenue R and Avenue S are shown on the City of Palmdale's Bikeway and Multi-Purpose Trail Plan map as part of the adopted master plan route for bikeways and trails (City of Palmdale, 2019b); however, the project portions of Avenue R and Avenue S currently do not have bike lanes. Therefore, the proposed project would have no impacts on bike facilities. Both Avenue R and Avenue S are surrounded by residential development and have sidewalks either on one side of the street or on both sides of the street. During project construction the use of the sidewalks by pedestrians and bicyclists would be temporarily impacted. However, a traffic control plan would be prepared to accommodate the construction work area on the project site, including sidewalks and any



areas used by pedestrians and bicyclists. Therefore, these impacts would be temporary and the proposed project would have a less than significant impact on pedestrians and bicyclists.

Based on the analysis above, the project would not conflict with any program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Impacts during construction would be temporary and less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

No Impact

CEQA Guidelines § 15064.3 subdivision (b) is the criteria for analyzing transportation impacts. Subsection (b)(2) specifically addresses transportation projects and states the following:

“Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.”

At the time of this analysis, no data for vehicle miles travelled on Avenue R and Avenue S was available. CEQA Guidelines § 15064.3 subsection (b)(3) states that if existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project’s vehicle miles traveled qualitatively.

The project would not result in additional traffic or additional vehicle miles traveled. The proposed project is designed to reduce traffic congestion by improving traffic signal coordination and improving vehicle movement on the project portions of Avenue R and Avenue S. Therefore, the project would have a less than significant impact because it would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).



- c) **Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

No Impact

As discussed in **Section 3.0**, in addition to the extension of fiber optics and installation of new signals and CCTV, the project also proposes design features that would reduce potential hazards at certain intersections on Avenue R and Avenue S.

Design improvements proposed at Avenue R and 65th Street East include:

- widening of the eastbound right turn pocket; and
- widening of the west side to add a northbound left-turn lane, and addition of a southbound left-turn lane (no widening required).

Design improvements proposed at Avenue R and 70th Street East include:

- construction of a ten-foot shoulder on the east side from south of Avenue R to north of Avenue R; and
- addition of barriers to close access to the east side.

Design improvements proposed at Avenue S and 60th Street East (SW, SE, and NE corners) include:

- construction of an ultimate curb return for the northeast corner with short transitions;
- widening of the north side of Avenue S to the east of 60th Street East;
- removal of unneeded pavement from the north side;
- widening/improving the south side of Avenue S to include an eastbound right-turn lane; and
- connecting the existing sidewalk to the new curb return.

Since the proposed geometric design of the project would reduce hazards at those intersections, there would be no impact regarding this threshold. Furthermore, there would be no impact regarding incompatible use since the use of Avenue R and Avenue S would remain the same.

- d) **Would the project result in inadequate emergency access?**

Less than Significant Impact

Avenues R and S are identified as evacuation routes in Exhibit S-1³⁷ of the City's General Plan. During project construction, traffic controls would be needed to temporarily reduce available lanes during the construction of the ITS infrastructure and street resurfacing. Full road closures during project construction are not anticipated. In addition, a traffic control plan would be prepared to accommodate the construction work area on the project

37 City of Palmdale, Palmdale General Plan Safety Element, Exhibit S-1, Evacuation Routes. 1993.



❖ SECTION 4.17 - TRANSPORTATION ❖

site. These impacts would be short term and temporary and would have a less than significant impact on roadways utilized for emergency purposes.



4.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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:				
i) 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), or		X		
ii) A resource determined by the lead agency, in its discretion and 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Information from the August 2019 Cultural Resources Inventory Report prepared for the Project by UltraSystems (refer to **Appendix C**), describes the research methods and findings regarding potential cultural resources at the Project site. Research conducted for the Cultural Resources Inventory Report included a cultural resources record search at the South Central Coastal Information Center (SCCIC), a Sacred Lands File (SLF) record search by the Native American Heritage Commission (NAHC), and a pedestrian survey assessment.

No prehistoric archaeological resources were observed during the field survey. Previous cultural resources surveys within the half-mile buffer zone of the proposed Project resulted in no prehistoric archaeological sites or isolates being recorded. During the cultural resources record search at the SCCIC, no prehistoric resources were found. The results of the pedestrian assessment indicate it is highly unlikely that prehistoric properties will be adversely affected by construction of the Project. The cultural resource study findings at the SCCIC suggest that there is a low potential for finding prehistoric resources. No tribal cultural resources (TCRs) were documented within a half-mile radius of the Project site in the NAHC’s Sacred Lands File search. The Project site has not been recommended for historic designation for prehistoric resources or TCRs.



❖ SECTION 4.18 - TRIBAL CULTURAL RESOURCES ❖

- a) **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:**
- i) **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), or**

Less than Significant Impact with Mitigation Incorporated

Assembly Bill 52 requires meaningful consultation with California Native American Tribes on potential impacts to TCRs, as defined in Public Resources Code § 21074, that are either eligible or listed in the California Register of Historical Resources or local register of historical resources, as defined in Public Resources Code § 5020.1(k).³⁸

As part of the AB 52 process, Native American tribes submit a written request to the City of Palmdale's Public Works Department (City) (the Lead Agency for the proposed project) to be notified of projects within their traditionally and culturally affiliated area. The City provides written, formal notification to those tribes within 14 days of deciding to undertake a project. The tribe responds to the City within 30 days of receiving this notification if they want to engage in consultation on the project, and the City must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either (1) the parties agree to mitigation measures to avoid a significant effect on a Tribal Cultural Resource, or (2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached.

Information from the August 2019 Cultural Resources Report prepared by UltraSystems Environmental, Inc (**Appendix C**) describes the research conducted and analysis of potential cultural resources within the Project site. This research included a cultural resources record search at the SCCIC, a SLF record search by the NAHC, and a pedestrian survey assessment.

No prehistoric archaeological resources were observed during the field survey. Previous cultural resources surveys within the half-mile buffer zone resulted in no prehistoric archaeological sites or isolates being recorded within the project boundary. During the cultural resources record search at the SCCIC, no prehistoric resources were found. The results of the pedestrian assessment indicate it is highly unlikely that prehistoric properties will be adversely affected by construction of the project because of the modern built environment. The cultural resource study findings at the SCCIC suggest that there is a low potential for finding prehistoric resources.

38 California Natural Resources Agency (CNRA), 2007. The California Environmental Quality Act (CEQA). Guidelines for Implementation of the California Environmental Quality Act. Electronic document.



❖ SECTION 4.18 - TRIBAL CULTURAL RESOURCES ❖

No traditional cultural sites were documented within a half-mile radius of the Project site in the NAHC's Sacred Lands File search (**Attachment C "Native American Heritage Commission Record Search"** in **Appendix C**). During outreach to the five local tribes recommended by the NAHC, the Fernandeano Tataviam Band of Mission Indians stated that there were significant cultural resources within approximately two miles of the Project location, but the tribe was not aware of any significant cultural resources within the Project boundary (**Appendix C**, pages 4-5 and 6-1).

The Cultural Resources Inventory Report determined that there are no tribal cultural resources 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) within the project site or within a half-mile buffer surrounding the Project site. Therefore, no impacts would occur.

The Cultural Resources investigation determined that there are no tribal cultural resources 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) within the Project site or within a half-mile buffer surrounding the Project site. Therefore, no impacts are anticipated.

However, mitigation measures **CUL-1** (refer to **Section 4.5** above) and **TCR-1** (provided below) are recommended, if during construction unanticipated Tribal Cultural Resources were to be found.

MM TCR-1 In the event of unanticipated cultural resource finds, all work shall stop within a 60-foot radius of the find. Work shall not continue until the discovery has been evaluated by a qualified archaeologist meeting the Secretary of the Interior standard. The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) and the Fernandeano Tataviam Band of Mission Indians (FTBMI) shall be contacted and consulted to assist in the accurate recordation and recovery of the finds/resources. The archaeologist shall complete all relevant California State Department of Parks and Recreation (DPR) 523 Series forms to document the find and submit this documentation to the applicant, Lead Agency, SMBMI and FTBMI.

Level of Significance After Mitigation

Mitigation measure **CUL-1** requires training of construction workers to identify a potential cultural resource and **MM TCR-1** requires consultation of a qualified archaeologist and the local Native American representative if unanticipated discoveries are made during construction activities. With the implementation of mitigation measures **CUL-1** and **TCR 1**, impacts to Tribal Cultural Resources would be less than significant.

- ii) **A resource determined by the lead agency, in its discretion and 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**



Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact with Mitigation Incorporated

Assembly Bill 52 (AB 52) requires meaningful consultation with California Native American Tribes on potential impacts on tribal cultural resources (TCRs), as defined in Public Resources Code § 21074. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (California Natural Resources Agency [CNRA], 2007).

As part of the AB 52 process, Native American tribes must submit a written request to a lead agency to be notified of projects within their traditionally and culturally affiliated area. The lead agency must provide written, formal notification to those tribes within 14 days of deciding to undertake a project. The tribe must respond to the lead agency within 30 days of receiving this notification if they want to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either (1) the parties agree to mitigation measures (MMs) to avoid a significant effect on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached.

Letters were sent by the City of Palmdale Public Works Department (City), which is the project's Lead Agency, to local Native American tribes asking if they wished to participate in AB 52 consultation concerning the project. The letters were sent on October 15, 2019 by certified mail to the Torres Martinez Desert Cahuilla Indians, Fernandeano Tataviam Band of Mission Indians, the Gabrieleno/Tongva San Gabriel Band of Mission Indians, the Gabrieleno Tongva Indians of California Tribal Council, the Gabrielino/Tongva Nation, the Gabrielino-Tongva Tribe, Mr. John Valenzuela, the Gabrieleno Band of Mission Indians – Kizh Nation, the San Manuel Band of Mission Indians and the Soboba Band of Luiseño Indians. Consultation occurred and the City has determined to conclude consultation, implementing the tribes' recommended mitigations (Ulises Gonzalez, personal communication, January 22 and February 25, 2020).

No traditional cultural sites were documented within a half-mile radius of the Project site in the NAHC's Sacred Lands File search (Attachment C "Native American Heritage Commission Record Search and Native American Outreach" in **Appendix C**).

No prehistoric archaeological resources were observed during the field survey. The previous cultural resources surveys within the half-mile buffer zone resulted in no archaeological sites or isolates being recorded. During the cultural resources record search at the SCCIC, no prehistoric resources were found. The results of the pedestrian assessment indicate it is highly unlikely that prehistoric properties will be adversely affected by construction of the Project. The cultural resource study findings at the SCCIC suggest that there is a low potential for finding resources.



❖ SECTION 4.18 - TRIBAL CULTURAL RESOURCES ❖

Existing street, roadway infrastructure, and sidewalk construction efforts along the Project site, and adjacent residential and infrastructure construction, as described in **Section 3.0**, have intensely disturbed the soil within the Project area many feet deep. Additionally, the Project site has not been recommended for historic designation for prehistoric and tribal cultural resources. No specific tribal resources have been identified. For these reasons, no impacts to tribal prehistoric or historic resources are anticipated.

However, if during construction unanticipated Tribal Cultural Resources were to be found, the City would implement mitigation measure **TCR-1** described above and mitigation measures **TCR-2** through **TCR-5** as follow.

- MM TCR-2** The San Manuel Band of Mission Indians Cultural Resources Department and the Fernandeño Tataviam Band of Mission Indians shall be contacted, as detailed in **MM CUL-2**, **MM CUL-3** and **MM TCR-1**, of any pre-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 SMBMI and FTBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI and/or FTBMI for the remainder of the project, should SMBMI and/or FTBMI elect to place a monitor onsite.
- MM TCR-3** The Lead Agency and/or applicant shall, in good faith, consult with the FTBMI and SMBMI on the treatment and disposition (in an appropriate repository) of any Tribal Cultural Resources encountered during all ground-disturbing activities.
- MM TCR-4** Any and 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 the SMBMI and the FTBMI. The Lead Agency and/or applicant shall, in good faith, consult with the SMBMI and the FTBMI throughout the construction of the project.
- MM TCR-5** If human remain and/or funerary objects are encountered during any Project construction activities, work within a 100-foot buffer of the find shall cease and the Los Angeles County Coroner shall be contacted (also see **MM CUL-4** in **Section 4.5** above). If the human remains are determined to be Native American in origin by the County Coroner, the applicant shall immediately notify the Native American Heritage Commission, the Lead Agency, the SMBMI, the FTBMI and other consulting tribes.



Level of Significance After Mitigation

Mitigation measures **TCR-2** and **TCR-3** require consultation of a qualified archaeologist and the local Native American representative, if unanticipated discoveries are made during construction activities. With implementation of mitigation measures **TCR-1** through **TCR-5**, potential Project impacts on TCRs would be less than significant.



4.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of 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	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
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
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

a) Would the project require or result in the relocation or construction of 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?

Less Than Significant Impact

As the proposed project includes ITS infrastructure improvement, development of the project would primarily result in short-term stormwater discharges during the construction phase. As described in response to **Section 4.9 (a)**, since the construction area of the project site exceeds one acre, a NPDES permit would be required from the State Water Resources Control Board. In addition to implementing erosion and sediment control



❖ SECTION 4.19 - UTILITIES AND SERVICE SYSTEMS ❖

BMPs, the proposed project would be required to develop and implement a SWPPP during construction activities. Implementation of BMPs and the SWPPP during construction would minimize waste discharge from the site and reduce potential impacts related to wastewater treatment. No new or expanded stormwater facilities will be required either for construction or operations.

The project does not include either existing or new plumbing connections, so no increase in water or wastewater treatment requirements would result from project construction and operation.

Electric power requirements for the new equipment would not substantially exceed those for the existing system, so no new power generation facilities would be required.

The project would not use natural gas during either construction or operation.

The project would result in new telecommunications equipment. However, this IS/MND concludes that no significant impacts will occur. Therefore, impacts would be less than significant.

- b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

No Impact

Project construction would require a minimal amount of water, which is readily available from public sources. However, this water use would be temporary and would not generate a substantial demand for water supply. Once construction is completed, the project will not require water for its operation. Therefore, sufficient water supplies will be available and there will be no impacts on water supplies.

- c) Would the project 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?**

No Impact

The Palmdale Water Reclamation Plant, located at 39399 30th Street East in the City of Palmdale provides wastewater treatment for the city and has a current capacity of 12 million gallons of wastewater per day (Sanitation Districts of Los Angeles County, 2018). The stormwater runoff from the project site and wastewater generated by the project is not expected to change significantly from existing conditions. Neither project construction nor operation would generate wastewater that would require treatment or disposal through a wastewater treatment plant. Stormwater generated during project construction would be insignificant compared to the permitted capacity for existing



❖ SECTION 4.19 - UTILITIES AND SERVICE SYSTEMS ❖

wastewater treatment facilities that provide service to the area. Therefore, the project is anticipated to result in no impacts to wastewater treatment providers.

- d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

Less Than Significant Impact

Project construction would generate a small amount of debris from breakup of concrete, excavation and other limited area demolition. Construction and demolition waste would be hauled to appropriate local landfills, whose capacity would not be significantly diminished. The nearest active landfill to the project site is the Antelope Valley Public Landfill in the City of Palmdale; the facility accepts construction and demolition waste. Operation of the project would generate negligible solid waste. Therefore, impacts related to disposal of solid waste would be less than significant.

- e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

No Impact

Project construction would generate a small amount of debris from breakup of concrete, excavation and other limited area demolition. Operation of the project would generate negligible solid waste. The project would comply with AB 939 (Zero Waste program) and applicable County of Los Angeles Countywide Integrated Waste Management Plan (CIWMP) requirements for waste reduction. For these reasons, no impacts to federal, state and local statutes and regulations related to solid waste are anticipated.



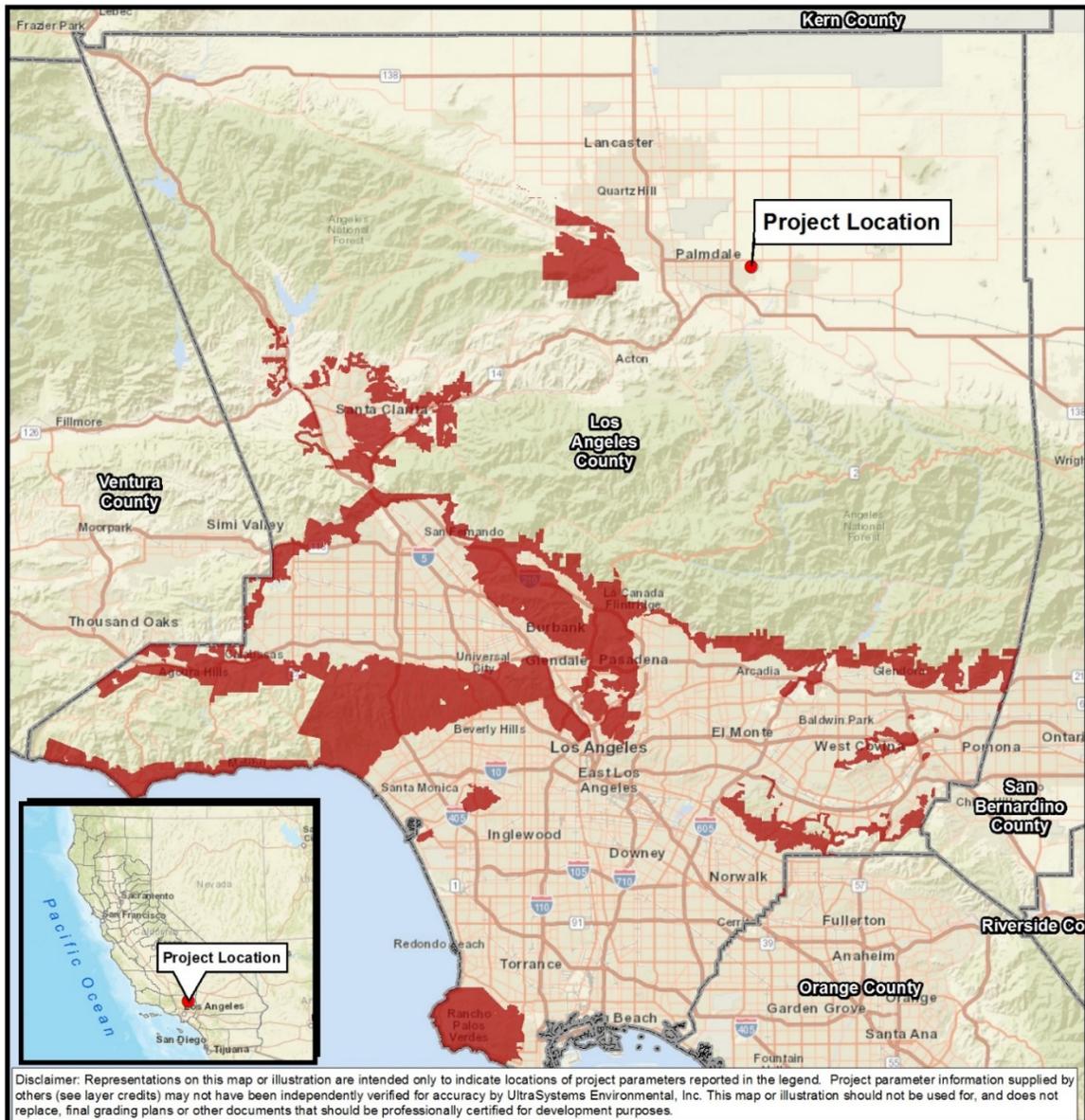
4.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

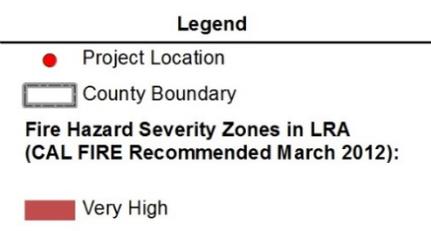
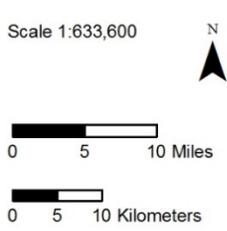
As demonstrated in **Figure 4.20-1**, the project site is not located in a Fire Hazard Severity Zone Local Responsibility Area. Review of the Department of Forestry and Fire Protection (CAL FIRE) Fire Resource and Assessment Program (FRAP) maps for state responsibility areas (SRAs) in Los Angeles County indicates that the project site is not located in an SRA (CAL FIRE, 2018). Moreover, the City of Palmdale does not contain any areas classified as very high fire hazard severity zones (VHFHSZs) in state responsibility areas. A portion of land along the city’s southern boundary is classified as a VHFHSZ under a local responsibility area (LRA) (CAL FIRE, 2019). This region is separated from the project site by other developed areas of the city. Therefore, the project site is not located in a fire hazard severity zone, and is not located in a fire hazard severity zone for either an LRA or an SRA, as detailed in **Figure 4.20-1** and **Figure 4.20-2** below.



Figure 4.20-1
FIRE HAZARD SEVERITY ZONE - LOCAL RESPONSIBILITY AREA



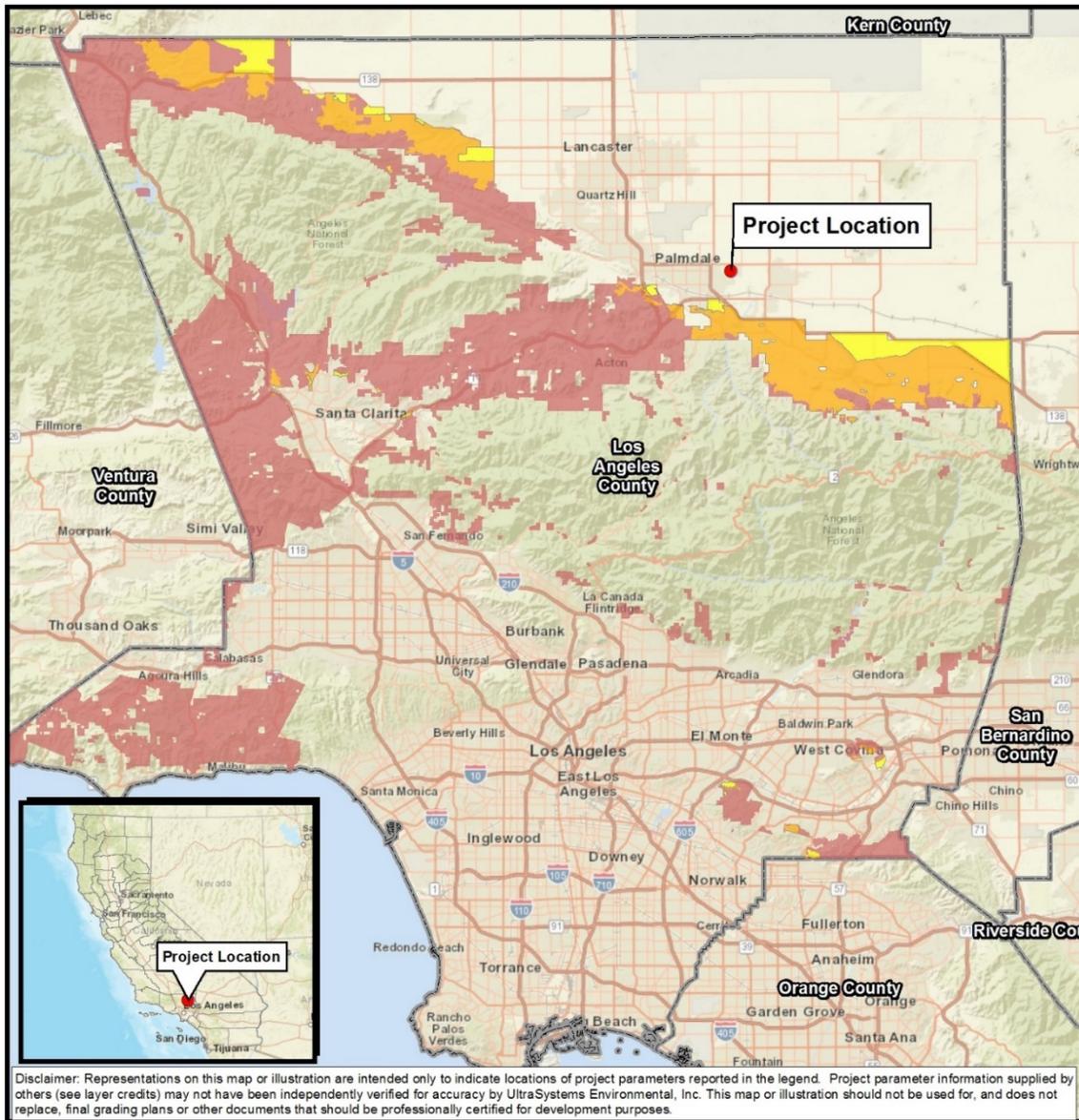
Path: J:\Projects\6060_Palmdale_ITS_Phase_IV\MXD\6060_Palmdale_IV_4_8_LA_County_Fire_Hazards_LRA.mxd
 Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community, Cal Fire, 2007/2012; Transportation & Energy Solutions, Inc., 2018; UltraSystems Environmental, Inc., 2016
 May 7, 2018



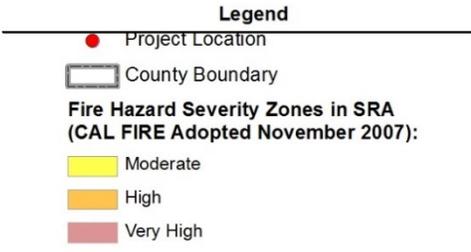
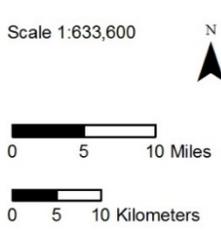
North County ITS Palmdale Extension Project
 Fire Hazard Severity Zone
 Local Responsibility Area (LRA)



**Figure 4.20-2
FIRE HAZARD SEVERITY ZONE - STATE RESPONSIBILITY AREA**



Path: J:\Projects\6060_Palmdale ITS Phase IV\MXDs\6060_Palmdale IV 4 8 LA County_Fire_Hazards_SRA.mxd
 Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community, CAL FIRE, 2007, Transportation & Energy Solutions, Inc., 2018, UltraSystems Environmental, Inc., 2016
 May 7, 2018



North County ITS Palmdale Extension Project
 Fire Hazard Severity Zone State Responsibility Area (SRA)





- a) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?**

No Impact

As detailed above, the project site is not located in or near areas or lands classified as very high fire hazard severity zones. Since the project is not located in an SRA or LRA, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur.

- c) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

No Impact

As detailed above, the project site is not located in or near areas or lands classified as VHFHSZs. No slopes are located on the project site which could exacerbate wildfire risks. Therefore, the project would not expose project occupants (i.e., those living and working along the streets where ITS equipment will be modified or installed) to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. There would be no impact.

- d) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

No Impact

As detailed above, the project site is not located in or near areas or lands classified as VHFHSZs. As demonstrated in this document, neither construction nor operation of the project would, after implementation of mitigation, result in significant temporary or ongoing impacts to the environment. It would be constructed in compliance with applicable building and fire codes. The proposed fuel tanks onsite would be operated in compliance with applicable state and local laws and would be subject to review and inspection by the City of Palmdale Fire Department. Therefore, the proposed project would not have an impact.

- e) **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream**



flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact

As detailed above, the project site is not located in or near areas or lands classified as VHFHSZs. The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The project site is relatively flat and is not located in an area with high slopes or unstable ground conditions. Therefore, the proposed project would not have an impact in this regard.



4.21 Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially 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		
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		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

- a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially 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?**

Less than Significant Impact with Mitigation Incorporated

As discussed in **Section 4.4** (Biological Resources) of this IS/MND, the project site is located in an urbanized setting which provides low habitat value for special-status plant and wildlife species. The project site contains ornamental trees in the adjacent residential areas that could potentially provide cover and nesting habitat for common bird species



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protected under the MBTA. Therefore, mitigation measure **BIO-1** is required to ensure the project would not significantly affect these species or affect migratory non-game breeding birds, and their nests, young and eggs.

As discussed in **Section 4.5** (Cultural Resources) of this IS/MND, based on the cultural resources records search conducted at the SCCIC, three historic cultural resource sites have been recorded within the 0.5-mile radius Area of APE boundary of the project site. However, all three sites have subsequently been demolished by residential development. Therefore, no impacts on historic resources would occur.

Based on the results of the CHRIS records search, a search of the SLF by the NAHC, tribal consultation, the onsite field survey, and research on the ethnography and prehistory of the region (see **Appendix C**), this region is known to have been utilized by the Vanyume (Desert Serrano), Tataviam and earlier Native American populations. However, there is a low potential for the presence of cultural resources that could be adversely affected by construction of the project because there are no known sites in the immediate area of the project site. It is not likely that undisturbed unique archeological resources exist on the project site. However, subsurface trenching activities associated with the project could result in the unanticipated discovery of unique archeological resources. In the event of an unexpected discovery, implementation of mitigation measures **CUL-1 and CUL-2** would ensure that impacts to archaeological resources would be less than significant.

The Cultural Resources investigation determined that there are no tribal cultural resources 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 § 5020.1(k) within the project site or within a half-mile buffer surrounding the project site. However, mitigation measure **TCR-1** is recommended, if during construction unanticipated Tribal Cultural Resources were to be found. With the implementation of mitigation measure **TCR-1**, impacts on tribal cultural resources would be less than significant.

- 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)?**

Less than Significant Impact with Mitigation Incorporated

As discussed in **Section 4.3** (Air Quality) construction of the proposed project would generate short-term and intermittent emissions. The primary source of air emissions would come from the exhaust of offroad construction equipment needed to complete construction activities. The project would not exceed AVAQMD regional thresholds for air pollutants. Therefore, air quality impacts during construction would be temporary and less than significant.



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As discussed in **Section 4.16** (Traffic and Transportation) the project includes construction of a fiber optic interconnect, CCTV surveillance, TOC upgrades, and new and upgraded signals on portions of Avenue R and Avenue S. The project would improve synchronization and traffic flow and thus would improve service levels on Avenue R and Avenue S. The project would improve synchronization and traffic flow and would increase current and future traffic mobility by relieving traffic congestion on Avenue R and Avenue S. Furthermore, the expansion of the interconnected system would improve traffic signal coordination and shorten travel delays. Therefore, the project is consistent with the goals and policies of the City's General Plan Circulation Element and the 2018 CIP. The project would not conflict with any program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The project would not result in additional traffic or additional vehicle miles traveled. During project construction, traffic controls would be needed to temporarily reduce available lanes during the construction of the ITS infrastructure and street resurfacing. Full road closures during project construction are not anticipated. In addition, a traffic control plan would be prepared to accommodate the construction work area on the project site. Therefore, traffic impacts during construction would be temporary and less than significant.

The proposed project has either no impact, a less than significant impact, or a less than significant impact with mitigation incorporated with respect to all environmental issues pursuant to CEQA. Due to the limited scope of physical impacts to the environment associated with the proposed project, implementation of the mitigation measures described above would reduce impacts to the quality of the environment to less than significant levels. Therefore, a less than significant cumulative impact would occur with development of the project, and no additional mitigation is required.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact with Mitigation Incorporated

Section 4.8 (Hazards and Hazardous Materials) notes, the project site is not listed in the Cortese List of hazardous materials sites. The project involves the expansion of ITS infrastructure. There are no known current or proposed future operations that would involve the routine transport, use, or disposal of hazardous materials or hazardous wastes that may create a significant hazard to the public or environment. Compliance with applicable laws and regulations during construction would ensure that impacts associated with routine transport, use, or disposal of hazardous materials, are less than significant. Therefore, no adverse effects to human health are anticipated either directly or indirectly due to risk of accident or upset conditions.

The project would be constructed in conformance with applicable local building codes and requirements under the CBC to reduce impacts from strong seismic ground shaking. Adherence with applicable building codes and project-specific geotechnical recommendations would ensure that the project does not subject people to significant geologic hazards.



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The project site is located outside the 100-year flood zone, in an area characterized as moderate to low risk for FEMA flood hazard. Inundation by seiche or tsunami is not expected to occur because the project is not located nearby a coastline and not within the inundation area of Lake Palmdale. Therefore, there is no potential for exposure of the project site to a flood hazard, seiche or a tsunami and the project would not expose people to significant hydrologic hazards.

As discussed in **Section 4.13**, during the short-term construction phase, the project would result in exposure of nearby sensitive receptors to noise levels in excess of applicable thresholds of significance for noise. However, implementation of mitigation measures **N-1** through **N-4** would ensure that impacts from construction noise would be less than significant. Noise from the new traffic control equipment will be barely detectable, especially in a traffic noise environment. Therefore, the project would not generate a substantial permanent increase in noise levels during project operation, and noise impacts would be less than significant.

Therefore, the project would not have a substantial direct or indirect effect on human beings.



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7.0 MITIGATION MONITORING & REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) has been prepared in conformance with § 21081.6 of the Public Resources Code and § 15097 of the California Environmental Quality Act Guidelines, which requires all state and local agencies to establish monitoring or reporting programs whenever approval of a project relies upon a MND or an EIR. The MMRP ensures implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified, through the use of monitoring and reporting. Monitoring is generally an ongoing or periodic process of project oversight; reporting generally consists of a written compliance review that is presented to the decisionmaking body or authorized staff person.

It is the intent of the MMRP to: (1) provide a framework for documenting implementation of the required mitigation; (2) identify monitoring/reporting responsibility; (3) provide a record of the monitoring/reporting; and (4) ensure compliance with those mitigation measures that are within the responsibility of the City to implement.

The following table lists impacts and mitigation measures for adoption by the City in connection with approval of the proposed project, responsible and monitoring parties, and the project phase in which the measures are to be implemented.



❖ SECTION 7.0 - MITIGATION MONITORING & REPORTING PROGRAM ❖

**Table 7.0-1
MITIGATION MONITORING AND REPORTING PROGRAM**

TOPICAL AREA/IMPACT	MITIGATION MEASURE (MM)	RESPONSIBLE/ MONITORING PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
BIOLOGICAL RESOURCES				
<p>Construction of the proposed project may affect native breeding bird species, their nests, eggs and young, protected under the Migratory Bird Treaty Act (MBTA).</p>	<p>BIO-1: Pre-construction Nesting Bird Surveys: If construction begins during nesting bird season (generally February – August 31), no later than one week prior to ground-disturbing activities within the project site, a qualified biologist shall conduct preconstruction nesting bird clearance surveys within the project site and within a 100-foot buffer around the project site for nesting birds, and other sensitive species. To maintain compliance with the MBTA and California Fish and Game Code, and to avoid or minimize direct and indirect effects on migratory non-game nesting birds, and their nests, young, and eggs, the following measures shall be implemented.</p> <ul style="list-style-type: none"> • Construction activities that will remove or disturb potential nest sites should be scheduled outside the nesting bird season, if feasible. The nesting bird nesting season is typically from February 1 through August 31, but can vary slightly from year to year, usually depending on weather conditions. Raptors are known to begin nesting early in the year and end late. The raptor nesting bird season begins January 1 to September 15. • If construction activities that will disturb potential nest sites (e.g., trees and shrubs) cannot be avoided between January 31 and August 31, a qualified biologist shall conduct a pre-construction survey for nesting birds within the limits of project disturbance within seven calendar days prior to mobilization, staging and other project-related disturbance. Preconstruction surveys shall be conducted no more than seven days prior to vegetation trimming or removal, grubbing or grading, structure removal, or other construction-related disturbance. 	<p>City of Palmdale</p>	<p>Field Verification</p>	<p>City of Palmdale City of Palmdale During Construction</p>



❖ SECTION 7.0 - MITIGATION MONITORING & REPORTING PROGRAM ❖

TOPICAL AREA/IMPACT	MITIGATION MEASURE (MM)	RESPONSIBLE/ MONITORING PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
BIOLOGICAL RESOURCES				
	<ul style="list-style-type: none"> If an active bird nest is located during the pre-construction survey and potentially will be affected, a no-activity buffer zone shall be delineated on maps and marked in the field by fencing, stakes, flagging, or other means up to 500 feet for raptors, or 100 feet for non-raptors. Materials used to demarcate the nests shall be removed as soon as work is complete or the fledglings have left the nest. The qualified biologist shall determine the appropriate size of the buffer zone based on the type of activities planned near the nest and the species of the nesting bird. Buffer zones shall not be disturbed until a qualified biologist determines that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be affected by construction activities. Periodic monitoring by a biological monitor will be performed to determine when nesting is complete. After the nesting cycle is complete, construction activities may begin within the buffer zone. If neither nesting birds nor active nests are observed during the pre-construction survey(s), or if they are observed and would not be affected (i.e., are outside the buffer zone described above), then construction activities may begin and no further nesting bird monitoring will be required. 			
CULTURAL RESOURCES				
<p>Construction of the proposed project may affect undiscovered human remains during excavation at the project site.</p>	<p>CUL-1: A Worker Environmental Awareness Program (WEAP) Training shall be prepared and customized for the project area and proposed project site that describes the types of local Native American resources that are commonly found subsurface in interior Southern California. It shall include a brief description of the local tribes, the Tataviam and Serrano, including information from local tribal groups on their concerns for discoveries. Also included shall be descriptions and illustrations of common paleontological resources that may be encountered in the soil on the project site. Related local, state and federal regulations and laws shall be noted, as well as procedures to follow if cultural and/or paleontological resources are uncovered. This presentation shall be designed for the layman. Figures of common artifacts and fossils and a review of the project site shall be included. Materials shall be provided to the City, including copies of the PowerPoint presentation on either a CD or a “thumb drive” and hard copies of the</p>	City of Palmdale	Field Verification	<p>City of Palmdale City of Palmdale During Construction</p>



❖ SECTION 7.0 - MITIGATION MONITORING & REPORTING PROGRAM ❖

TOPICAL AREA/IMPACT	MITIGATION MEASURE (MM)	RESPONSIBLE/ MONITORING PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
	<p>presentation, so that City staff and project contractor supervisors themselves can give this training to construction crew.</p> <p>CUL-2: In the event that cultural resources are discovered during project activities, 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. Additionally, the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) and the Fernandeño Tataviam Band of Mission Indians (FTBMI) Tribal Historic and Cultural Properties Officer shall be contacted, as detailed within TCR-1, regarding any pre-contact finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.</p> <p>CUL-3: 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 SMBMI and FTBMI for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.</p> <p>CUL-4: If human remains are encountered during excavations associated with this project, all work shall stop within a 30-foot radius of the discovery and the Los Angeles County Coroner shall be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC and receiving access to the project site. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).</p>			



❖ SECTION 7.0 - MITIGATION MONITORING & REPORTING PROGRAM ❖

TOPICAL AREA/IMPACT	MITIGATION MEASURE (MM)	RESPONSIBLE/ MONITORING PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
GEOLOGY AND SOILS				
Construction of the proposed project may affect undiscovered paleontological resources or unique geologic features during excavation at the project site.	GEO-1: Any substantial excavations below the uppermost sediment layers shall be closely monitored by an on-call paleontologist. If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain onsite for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.	City of Palmdale	Field Verification	City of Palmdale City of Palmdale During Construction
NOISE				
Construction of the proposed project may generate temporary increases in ambient noise levels that exceed the thresholds of significance for noise in the project area, during the construction phase.	<p>N-1: If surrounding residents or businesses complain of excessive noise during construction, then the construction contractor will conduct noise monitoring in the residential or commercial area of concern during the suspected noise-producing construction activities. If the monitored noise levels exceed background levels by 5 dBA or more, then the construction contractor will mitigate noise levels using temporary noise shields, noise barriers or other mitigation measures to comply with those restrictions or standards. (See below.)</p> <p>N-2: The construction contractor will use the following source controls, except where not physically feasible:</p> <ul style="list-style-type: none"> • Use of noise-producing equipment will be limited to the interval from 7 a.m. to 6 p.m., Monday through Friday. • For all noise producing equipment, use types and models that have the lowest horsepower and the lowest noise generating potential practical for their intended use. • The construction contractor will ensure that all construction equipment, fixed or mobile, is properly operating (tuned-up) and lubricated, and that mufflers are working adequately. • Have only necessary equipment onsite. • Use manually-adjustable or ambient sensitive backup alarms 	City of Palmdale	Field Verification	City of Palmdale City of Palmdale During Construction



❖ SECTION 7.0 - MITIGATION MONITORING & REPORTING PROGRAM ❖

TOPICAL AREA/IMPACT	MITIGATION MEASURE (MM)	RESPONSIBLE/ MONITORING PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
NOISE				
	<p>N-3: The contractor will use the following path controls, except where not physically feasible:</p> <ul style="list-style-type: none"> • Install portable noise barriers, including solid structures and noise blankets, between the active noise sources and the nearest noise receivers. • Temporarily enclose localized and stationary noise sources. • Store and maintain equipment, building materials, and waste materials as far as practical from as many sensitive receivers as practical. <p>N-4: Advance notice of the start of construction shall be delivered to all noise sensitive receivers adjacent to the project area. The notice shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints with the contractor and the City.</p>			
TRIBAL CULTURAL RESOURCES				
Construction of the proposed project may affect undiscovered tribal cultural resources during excavation at the project site.	<p>TCR-1: In the event of unanticipated cultural resource finds, all work shall stop within a 60-foot radius of the find. Work shall not continue until the discovery has been evaluated by a qualified archaeologist meeting the Secretary of the Interior standard. The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) and the Fernandeño Tataviam Band of Mission Indians (FTBMI) shall be contacted and consulted to assist in the accurate recordation and recovery of the finds/resources. The archaeologist shall complete all relevant California State Department of Parks and Recreation (DPR) 523 Series forms to document the find and submit this documentation to the applicant, Lead Agency, SMBMI and FTBMI.</p> <p>TCR-2: The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) and the Fernandeño Tataviam Band of Mission Indians (FTBMI) shall be contacted, as detailed in MM CUL-2, MM CUL-3 and MM TCR-1, of any pre-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 SMBMI and FTBMI, and all</p>	City of Palmdale	Field Verification	City of Palmdale City of Palmdale During Construction



❖ SECTION 7.0 - MITIGATION MONITORING & REPORTING PROGRAM ❖

TOPICAL AREA/IMPACT	MITIGATION MEASURE (MM)	RESPONSIBLE/ MONITORING PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
	<p>subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI and/or FTBMI for the remainder of the project, should SMBMI and/or FTBMI elect to place a monitor on-site.</p> <p>TCR-3: The Lead Agency and/or applicant shall, in good faith, consult with the FTBMI and SMBMI on the treatment and disposition (in an appropriate repository) of any Tribal Cultural Resources encountered during all ground disturbing activities.</p> <p>TCR-4: Any and 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 the SMBMI and the FTBMI. The Lead Agency and/or applicant shall, in good faith, consult with the SMBMI and the FTBMI throughout the construction of the project.</p> <p>TCR-5: If human remain and/or funerary objects are encountered during any Project construction activities, work within a 100-foot buffer of the find shall cease and the Los Angeles County Coroner shall be contacted. If the human remains are determined to be Native American in origin by the County Coroner, the applicant shall immediately notify the Native American Heritage Commission, the Lead Agency, the SMBMI, the FTBMI and other consulting tribes.</p>			