Initial Study/Mitigated Negative Declaration & Mitigation Monitoring & Reporting Program (MMRP)

Copart 66-Acre Project (CUP 23-01)

SW Corner of Racoon Avenue & Holly Road

Lead Agency:

City of Adelanto
Development Services Department – Planning Division
11600 Air Expressway Boulevard
Adelanto, CA 92301

Prepared By:

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July 1, 2026

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Appendix B - Copart 66 Biological Resources Assessment Report. Casc Engineering and Consulting, Inc. December 2023.

Appendix C - Copart 66 Jurisdictional Delineation Report. Casc Engineering and Consulting, Inc. January 2024.

Appendix D- Cultural and Paleontological Resources Services for the Copart Racoon Avenue Project, Located in Adelanto, County of San Bernardino, California (DUKE Project Number C-0467). Duke Cultural Resources Management. May 2, 2023.

Appendix E - Racoon Avenue Energy Analysis City of Adelanto. Urban Crossroads, Inc. May 8, 2023.

Appendix F - Preliminary Soils and Infiltration/Percolation Feasibility Investigation APNs 3128-341-01, -02, -04, and -06 Adelanto, California. LOR Geotechnical Group, Inc. October 26, 2022.

Appendix G - Raccoon Avenue Greenhouse Gas Analysis City of Adelanto. Urban Crossroads, Inc. May 8, 2023.

Appendix H - Preliminary Drainage Analysis for Copart 66 City of Adelanto San Bernardino County, California. Casc Engineering and Consulting. January 2025.

Appendix I - Racoon Avenue Noise Impact Analysis City of Adelanto. Urban Crossroads, Inc. April 24, 2023.

Appendix J - Holly Road and Racoon Avenue Trip Generation Analysis, City of Adelanto. TJW Engineering, Inc. May 1, 2023.

Appendix K- Conceptual Grading Plan Copart Racoon 66, Casc Engineering and Consulting.

CHAPTER ONE – INTRODUCTION

1.1 Purpose and Authority

This Initial Study/Mitigated Negative Declaration ("IS/MND") has been prepared in accordance with the California Environmental Quality Act (California Public Resources Code §§ 21000 *et seq.*) ("CEQA") to evaluate the potential environmental impacts associated with the implementation of the proposed Copart 66-Acre Project ("Project") located at the southwest corner of Racoon Avenue and Holly Road in the City of Adelanto, California. This document is prepared in conformance with CEQA and the CEQA guidelines (California Code of Regulations, Title 14, § 15000 *et seq.*). This IS/MND is intended to serve as an informational document for the public agency decision makers and the public regarding the Project.

1.2 Documents Incorporated by Reference

As permitted by Section 15150 of the CEQA Guidelines, this IS/MND references several technical studies and analyses. Information from the documents incorporated by reference is briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the IS/MND has also been described. The documents and other sources used in the preparation of this IS/MND include, but are not limited to:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
- Final Environmental Impact Report City of Adelanto General Plan Update (May 1995)
- City of Adelanto, California Municipal Code, Ordinance No. 636, passed October 26, 2022
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- San Bernardino County Countywide Plan (October 2020)

1.3 Documents Prepared for the Project

As part of the CEQA review process, the lead agency determined that the following stand-alone technical studies be prepared for the Project, and they are appended to the IS/MND as follows:

- Air Quality Impact Analysis (Appendix A)
- Biological Resources Assessment Report (Appendix B)
- Jurisdictional Delineation Report (Appendix C)
- Cultural/Paleontological Resources Assessment (Appendix D)
- Energy Analysis (Appendix E)
- Preliminary Soils Investigation (Appendix F)
- Greenhouse Gas Analysis (Appendix G)
- Drainage Analysis (Appendix H)
- Noise and Vibration Analysis (Appendix I)
- Trip Generation Analysis (Appendix J)

CHAPTER TWO – PROJECT DESCRIPTION

2.1 Project Summary

1. Project Title:

Copart 66-Acre Project (CUP 23-01)

2. Lead Agency Name and Address:

City of Adelanto, 11600 Air Expressway, Adelanto, CA 92301

3. Contact Person and Phone Number:

Louis Morales, Planner
(760) 246-2300 ext. 11190

4. Project Location:

The Project site is located in the southern portion of the City of Adelanto in the County of San Bernardino and is comprised of four (4) parcels (APNs: 3128-341-01, -02, -04, -06) that total approximately 65.95 acres. The site is bounded by Holly Road to the north, Raccoon Avenue to the east, and Cactus Road to the south.

5. Project Applicant's Name and Address:

Copart, Inc.
14185 Dallas Parkway, Suite 300
Dallas, Texas 75254.

6. General Plan/Zoning Designation:

Existing: Manufacturing/Industrial (MI)
Proposed: None

7. Project Description:

Copart, Inc. ("Applicant") has submitted to the City of Adelanto ("City") an application for a Development Plan and Conditional Use Permit (CUP 23-01) to construct a parking lot for the storage of totaled vehicles of all types (cars, trucks, rv's, etc.) on approximately 65.95 acres of predominately vacant land located at the southwest corner of Holly Road and Raccoon Avenue (see *Figure 2-1: Regional Vicinity*). The Project site consists of four (4) existing parcels: Accessor's Parcel Numbers (APNs) 3128-341-01, 02, 04, and 06 (see *Figure 2-2: Project Boundary*). Though (APN) 3128-341-01 is part of the Project site, it will not be graded thus no impacts will occur besides sidewalk and street improvements within the right of way (ROW) of Holly Road. The Project site is vacant and includes a City of Los

Angeles Department of Water and Southern California Edison (SCE) utility easement that runs north-south through the central portion of the site. The SCE easement is approximately 330 feet wide and was recorded September 28, 1990 with a public utilities recording number 90-388717. The proposed Project will not result in a any impacts to the SCE easement as it is outside of the Project boundary (see *Figure 2-4: Conceptual Site Plan*). The City's General Plan Land Use and Zoning Map designates the Project site as Manufacturing/Industrial (MI) (see *Figure 2-3: General Plan Land Use and Zoning*).

The proposed Project will serve as an overflow parking lot for the main Copart Adelanto site located approximately 0.3 miles east of the Project site, north of Holly Road. Totaled vehicles stored onsite will be sold via online auctions and/or held for insurance companies throughout the insurance claim process. Onsite improvements include grading, a gravel parking lot, perimeter fencing to screen from street views, and a detention basin at the northeast corner of the site, south of Holly Road. Additional improvements include the installation of asphalt pavement on Holly Road, Raccoon Avenue and Cactus Road, and curb and gutter, sidewalk, and landscaping improvements along the Project frontage. Access to the site will be provided via one (1) commercial driveway with security gate off Cactus Road.

The overflow vehicle storage facility will be operational Monday through Friday between the hours of 8:00 A.M. and 5:00 P.M. Copart staff will be onsite on an as needed basis to assist with incoming deliveries and collection of vehicles from the main Copart Adelanto site. Project operation is estimated to produce approximately 8 to 10 truck trips per day. Daily incoming trucks will include medium duty trucks, such as tow trucks, and a 938M Caterpillar tractor loader will be utilized to move the vehicles around the site.

8. Surrounding Land Uses and Setting:

Land uses surrounding the Project site primarily consist of vacant land, scattered industrial and utility uses, and Adelanto High School to the southeast. Specific land uses located in the immediate vicinity of the Project site are described below:

North: To the north of the Project Site is vacant land with minor storage uses designated as Manufacturing/Industrial (MI).

South: To the south of the Project Site is vacant land that is located in unincorporated San Bernardino County and is designated as Rural Living (RL).

East: To the east of the Project Site is vacant land designated as Single Family Residential (R1).

West: To the west of the Project Site is vacant land designated as Manufacturing/Industrial (MI).

9. Other Public Agencies Whose Approval is Required:

- Regional Water Quality Control Board: NPDES Permit, construction run-off permits, Storm Drain MS4 Permit and Waste Discharge Requirements (WDR).
- California Department of Fish and Wildlife (CDFW): Incidental Take Permit (ITP) and Streambed Alteration Agreement (SAA).

10. California Native American Tribes:

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

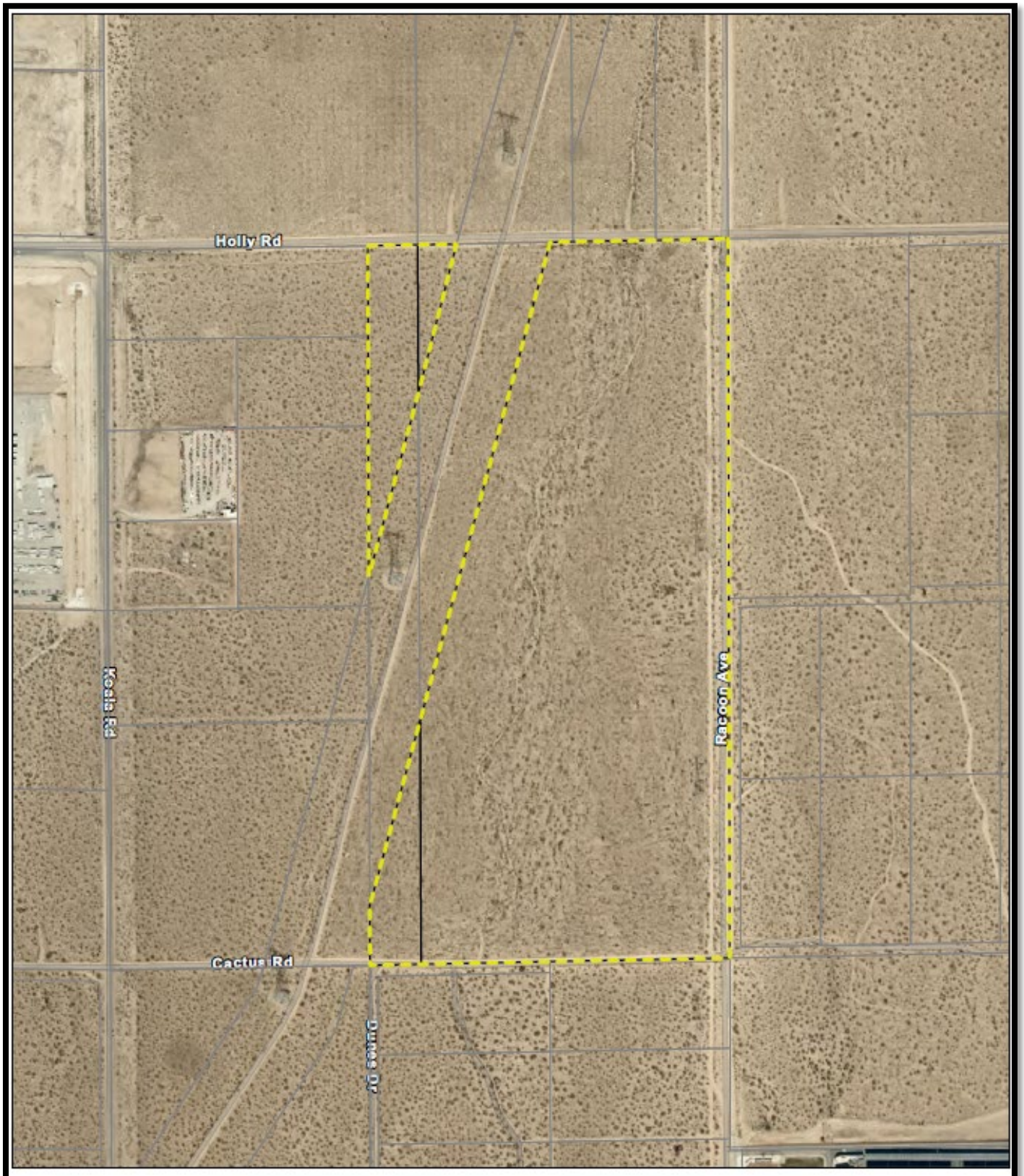
On January 30, 2025, the City, as Lead Agency, initiated the AB 52 process by notifying five (5) tribes traditionally or culturally affiliated with the Project area or who requested notice for all City projects. Notified contacts included representatives from the Agua Caliente, Soboba, Serrano Nation, Yuhaaviatam of San Manuel Nation (YSMN), and Morongo. The YSMN requested consultation and additional information on February 14, 2025, and provided Mitigation Measures on April 21, 2025. These mitigation measures are included in Section XVIII of this Initial Study/Mitigated Negative Declaration (IS/MND). Morongo requested an extension of the 30-day consultation period on April 26, 2025; however, as of May 30, 2025, no additional mitigation measures have been received. Therefore, the City has fulfilled AB 52 requirements and consultation has concluded.



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Figure 2-1 Regional Vicinity

Copart 66-Acre Project
City of Adelanto, CA



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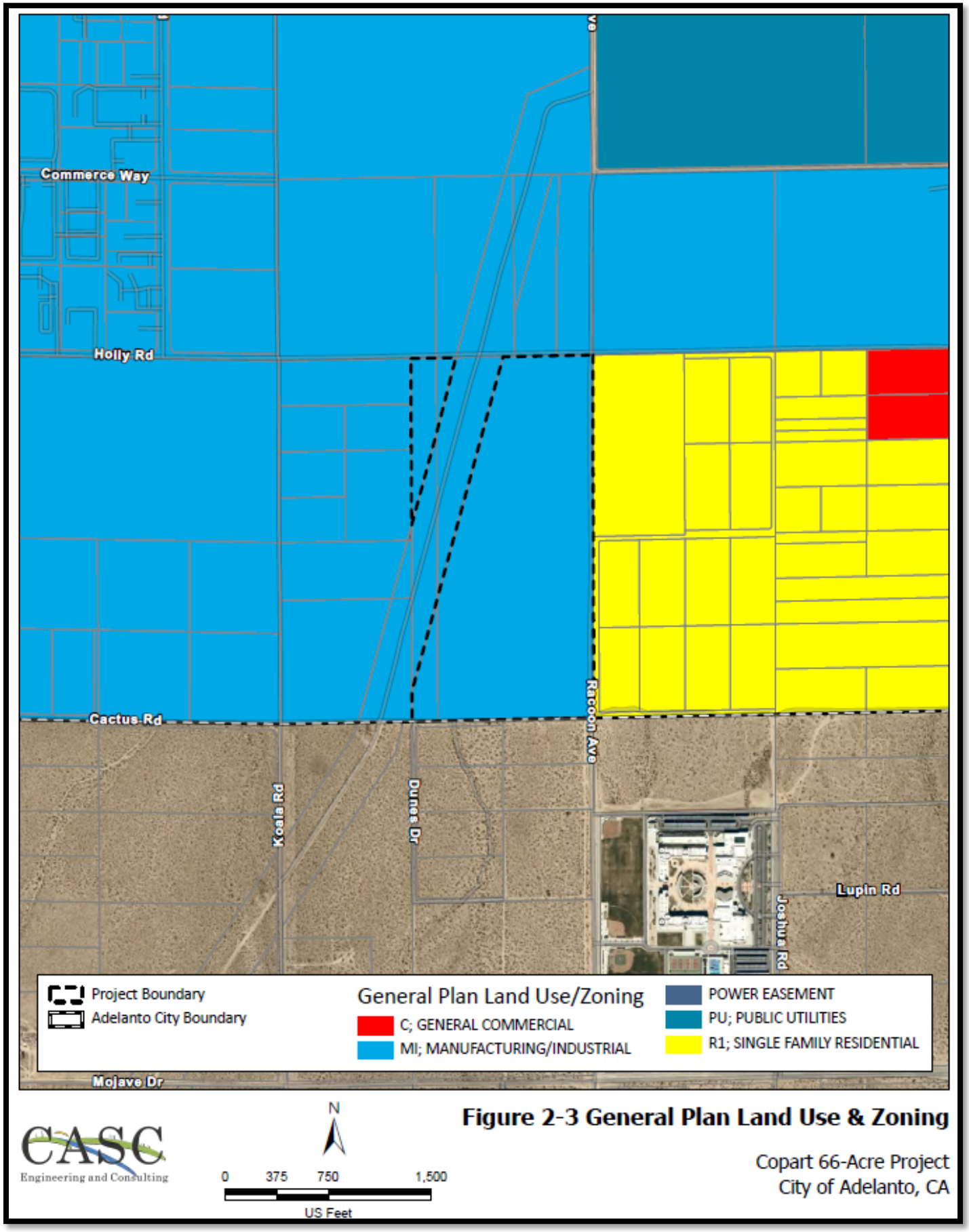
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Figure 2-2 Project Boundary

Copart 66-Acre Project
City of Adelanto, CA

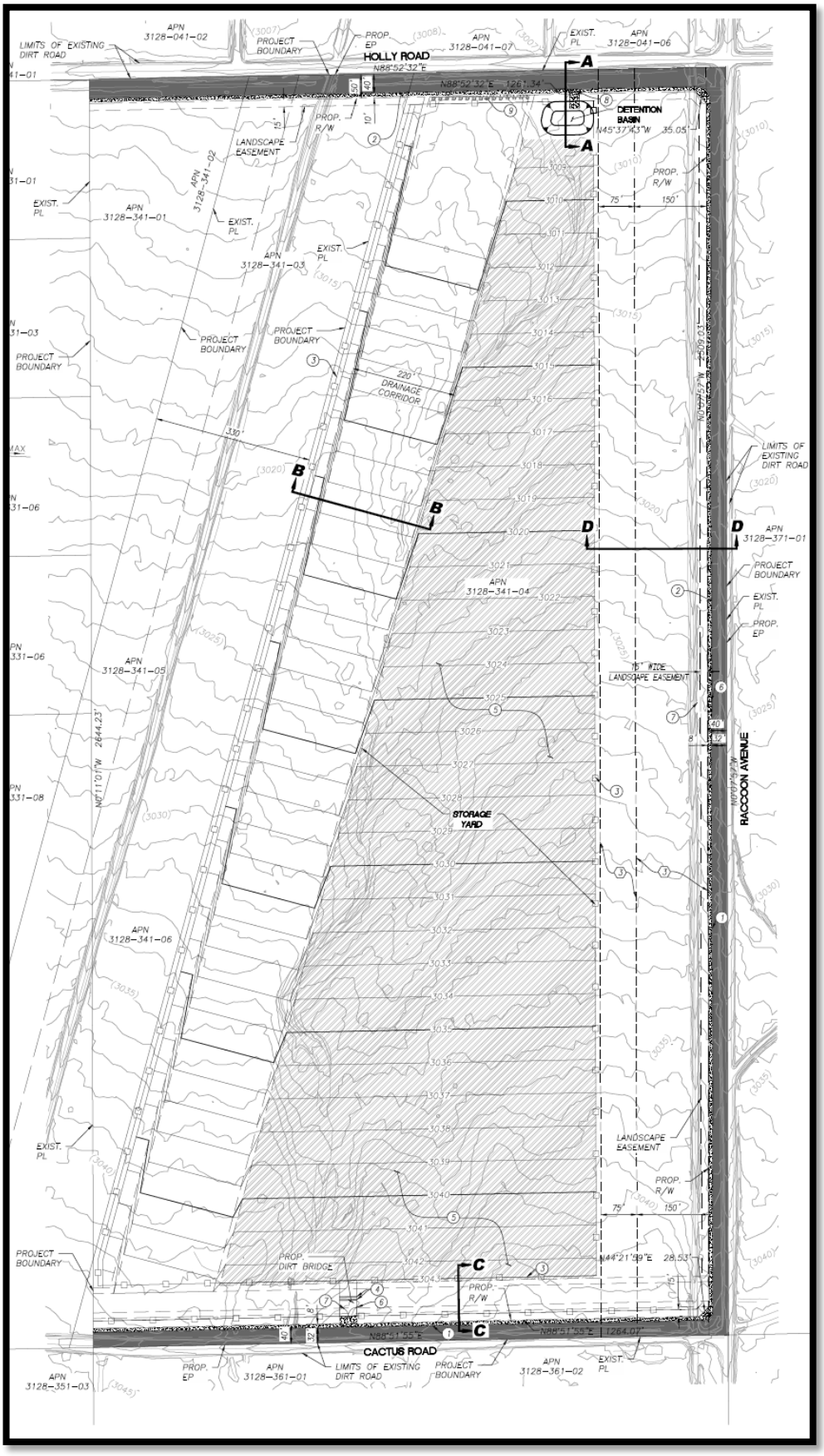


CASC Engineering and Consulting

Figure 2-3 General Plan Land Use & Zoning

Copart 66-Acre Project
City of Adelanto, CA

Figure 2-4: Conceptual Site Plan



2.2 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 "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☒	Geology/Soils	☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials
☐	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☐	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation/Traffic	☒	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

2.3 Determination

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 has been 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 adequately analyzed 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.



Planner, City of Adelanto

8/17/2026

Date

2.4 Evaluation of Environmental Impacts

The following environmental analysis and substantiation analyzes the proposed Project's potential environmental impacts in accordance with the following requirements:

1) 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).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) 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.

4) "Negative Declaration: Less Than Significant Impact 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 a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross referenced).

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

    a) **Earlier Analysis Used.** Identify and state where they are 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 Impact with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.

6) 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.

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

8) 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.

9) 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.

CHAPTER THREE – ENVIRONMENTAL IMPACT DISCUSSION

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics – Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) 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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Land Use and Community Design Element
  - Open Space and Conservation Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - Section 3.6 Light and Glare
- Title 17 – Adelanto Zoning Ordinance
  - Section 17.15.070 Industrial Design Standards
- California Department of Transportation, 2018. List of eligible and officially designated State Scenic Highways. 2018. Available on-line at: Scenic Highways | Caltrans

Discussion of Impacts

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

Less than Significant Impact: The City encompasses a vast amount of vacant, desert landscapes which it recognizes as having scenic value. Viewsheds identified in the Comprehensive Sustainable Plan include the undeveloped desert landscapes throughout the City and the City's Sphere of Influence (SOI), the Mojave River, and the distant views of mountains to the south, east, and west. The Adelanto North 2035 Comprehensive Sustainable

Plan (2014) identifies the Shadow Mountains along the western boundary of the City as a scenic resource. A significant amount of open space in the City is located west of Caughlin Road and includes the Shadow Mountain hillsides and the majority of the Fremont Wash, a natural drainage course that runs north-south through the City.

The proposed Project site is located approximately 3.2 miles east of the Fremont Wash, 2.2 miles east of the open space designated west of Caughlin Road and 8.5 miles west of the Mojave River. The Project site is not located in a scenic vista or viewshed. Scenic views from the Project site include vacant desert landscapes to the north, distant hillsides to the east, and the San Bernardino mountains to the south. Additional views from the Project site include manufacturing warehouses to the northwest, the Adelanto Power Conversion Station to the northeast, warehouse storage uses west of Koala Road, and Adelanto High School to the southeast. Vacant land is located west of the Project site with minor equipment storage and is a proposed 18.26-acre parking lot for the storage of totaled vehicles by the Applicant under a separate entitlement (CUP 23-02). Additionally, a Los Angeles Department of Water and Power easement consisting of transmission lines runs through the Project site north-south. The existing manufacturing, industrial warehouses, and transmission lines disrupt north, south, east, and west views from the site. Furthermore, the proposed Project is consistent in scale and character with the existing storage and manufacturing uses north of Holly Road, and west of Koala Road. Based on the preceding, the proposed Project would not have a substantial, adverse effect on a scenic vista and a less than significant impact would occur.

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 Project site is not located within or adjacent to a scenic highway corridor and does not contain scenic resources, such as rock outcroppings or historic buildings. The nearest Designated State Scenic Highways to the Project site are Interstate 15 (I-15) and Highway 247 (SR-247), both of which are located in central Barstow and approximately 30.1 miles northeast of the Project site. Therefore, Project impacts on scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway are considered low and no impact would occur.

c) In nonurbanized 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: The Project site is located within an urbanized area and is surrounded by vacant land and manufacturing warehouses to the north, an industrial storage yard to the west, vacant land and a Los Angeles Department of Water and Power easement to the east, vacant land to the south and Adelanto High School to the southeast. The proposed Project would be required to comply with Chapter 17.15.070 Industrial Design Standards in the City of Adelanto Code of Ordinances. The design specifications for the Project will be reviewed by the City for compliance with all applicable provisions set forth by the City's Development Code and the General Plan. As part of the City's development review process,

the Project's architectural plans will be reviewed by City staff and the Planning Commission to determine whether Project design conforms to the Development Code. Furthermore, the proposed Project is consistent in scale and visual character with the existing uses north and west of the Project site. Therefore, the Project would not conflict with applicable zoning or other regulations governing scenic quality and impacts would be less than significant.

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

No Impact: The proposed Project does not include the installation of lighting and would therefore not introduce new sources of light at the Project site or surrounding areas. Therefore, additional light sources are not anticipated to adversely affect day or nighttime views in the area, and no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forestry Resources – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to the information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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 nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resource Code section 122220(g)), timberland (as defined by Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - 6.0 - Open Space and Conservation Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.1 Earth Resources
  - 3.4 Biological Resources

- County of San Bernardino NR-5 Agricultural Resources Policy Map, as of October 2020
- California Department of Conservation (CDC), California Important Farmland Finder (CIFF), 2018

Discussion of Impacts

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 CDC Farmland Mapping and Monitoring Program (FMMP) identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance or Potential, and Grazing Land. The classification of farmland is determined by a soil survey conducted by the Natural Resources Conservations Service (NRCS) which analyzes the suitability of soils for agricultural production. Based on the California Important Farmland Finder, the Project site is classified as "Grazing Land". Therefore, the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. No impact would occur.

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

No Impact: The Project site is currently zoned as Manufacturing/Industrial (MI) and is no zoned for agriculture use. According to the County of San Bernardino NR-5 Agricultural Resources Policy Map, the Project site is not located in a Williamson Act Renewable Farmlands Contract area. Additionally, there are no properties within the Project's vicinity subject to a Williamson Act Contract. Therefore, the proposed Project would have no potential to conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resource Code section 122220(g)), timberland (as defined by Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?

No Impact: The Project site is designated as Manufacturing/Industrial (MI). According to the City's General Plan Land Use and Zoning Map, the Project site is not located within or adjacent to forest land, timberland, or timberland zoned Timberland Production. Therefore, no impact would occur.

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

No Impact: The Project site is vacant with an existing utility easement that runs through the Project site north-south. The site contains sparsely scattered Joshua trees, bushes, and little groundcover which are vegetation communities that would not qualify as forest land. Thus,

the proposed Project would not result in the conversion of forest land to non-forest use. No impact 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 nonagricultural use or conversion of forest land to non-forest use?

No Impact: As previously discussed under Section II (a), the Project site is classified as "Grazing Land" by the California Department of Conservation and does not meet the definition of Farmland (i.e., "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance"). The Project site contains no active agricultural uses under existing conditions. Accordingly, implementation of the Project would not convert areas on the subject property classified as Farmland to non-agricultural use. Additionally, neither the Project site nor its surroundings contain forest land. Therefore, the Project would not result in the conversion of forest land to non-forest use. No impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan
  - 6.0 - Open Space and Conservation Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.2 – Climate and Air Quality
- Title 8 – Health and Sanitation of the Adelanto Municipal Code
  - Chapter 8.25 – Public Nuisances
- Racoon Avenue Air Quality Impact Analysis, City of Adelanto. Urban Crossroads, Inc. May 8, 2023. (Appendix A).

Discussion of Impacts

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact: The Project site is located within the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The MDAQMD encompasses approximately 20,000 square miles including San Bernardino County's High Desert and Riverside County's Palo Verde Valley. The MDAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards through the implementation of an Air Quality Management Program (AQMP). The Environmental Protection Agency (EPA) has identified the most common air pollutants as criteria pollutants and they are as follows: ozone (O3), particulate matter ten (10) microns or less (PM10), particulate matter 2.5 microns or less (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO2), and sulfur dioxide (SO2).

Currently, the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are exceeded in most parts of the MDAB. The attainment status of criteria pollutants in the MDAB is shown in *Table 3-1: Attainment Status of Criteria Pollutants in the MDAB* below. In response, the MDAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

Table 3-1: Attainment Status of Criteria Pollutants in the MDAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassifiable/Attainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
SO_2	Attainment	Unclassifiable/Attainment

Note "-" = The national 1-hour O3 standard was revoked effective June 15, 2005.

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emission projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with the indicators discussed below:

Criterion 1 – Local land use plans and/or population projections:

The existing General Plan Land Use and zoning designation of the Project site is Manufacturing/Industrial (MI). The Manufacturing/Industrial (MI) zoning district provides for a wide range of industrial uses, including light and heavy industrial and manufacturing uses, which may produce a small environmental impact such as noise, vibration, air pollution, glare, or waste disposal. The Manufacturing/Industrial designation allows for a maximum FAR of 0.60. Upon approval of a Conditional Use Permit, the proposed Project is permitted under the site's existing Land Use Designation.

Criterion 2 - All MDAQMD Rules and Regulations:

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), 403 (Fugitive Dust), and 1113 (Architectural Coatings).

Criterion 3 - Demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards:

Consistency Criterion No. 3 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional significance thresholds were exceeded. As evaluated in the Air Quality Impact Analysis (Appendix A), the Project's regional construction and operational-source emissions would not exceed applicable regional significance thresholds.

Based on the preceding, the proposed Project would not have the potential to result in or cause NAAQS or CAAQS violations. Additionally, Project construction and operational-source emissions would not exceed the regional significance thresholds. Further, the Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase. The proposed Project is therefore considered to be consistent with the AQMP and a less than significant impact is expected.

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?

Less than Significant Impact: The CAAQS designates the Project site as nonattainment for O3 (1-hour and 8-hour) and PM10, and the NAAQS designates the Project site as nonattainment for O3 (8-hour) and PM10. The AQMD states that individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed MDAQMD thresholds for project-specific impacts would be considered cumulatively considerable. The following analysis is based on the Air Quality Impact Analysis prepared by Urban Crossroads, Inc for the proposed Project (Appendix A).

The MDAQMD has developed regional significance thresholds for criteria pollutants, as summarized in *Table 3-2: Maximum Daily Regional Emissions Thresholds*. The MDAQMD's Guidelines indicate that any projects in the MDAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

Table 3-2: Maximum Daily Regional Emissions Thresholds

Pollutant	Daily Threshold (lbs/day)
CO	548 lbs/day
NO_x	137 lbs/day
VOC	137 lbs/day
SO_x	137 lbs/day
PM_{10}	82 lbs/day

$PM_{2.5}$	65 lbs/day

*lbs/day – Pounds Per Day

Construction Related Impacts

The Project involves construction activities associated with site preparation, grading, building construction, paving, and architectural coating. Construction activities associated with the Project would result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Construction is scheduled to commence and be completed in 2024. The construction emissions analysis prepared by Urban Crossroads represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. *Table 3-3: Emissions Summary of Construction – Without Mitigation* presents the results of the Project's regional construction impact assessment.

Table 3-3: Emissions Summary of Construction - Without Mitigation

Year	Emissions (pounds/day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Summer						
2024	90.84	21.27	27.14	0.04	1.17	0.94
Winter						
2024	4.04	59.70	36.77	0.20	10.34	4.21
Maximum Daily Emissions	**90.84**	**59.70**	**36.77**	**0.20**	**10.34**	**4.21**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

The Project-specific evaluation of emissions presented in *Table 3-3: Emissions Summary of Construction – Without Mitigation* demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, the proposed Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis (Appendix A).

Operation Related Impacts

Long-term air quality impacts generally involve mobile source emissions generated from project-related traffic and stationary source emissions. Operational emissions would be expected from the following primary sources—mobile source emissions and area source emissions. The estimated emissions generated by Project operations are shown in *Table 3-4: Summary of Peak Operational Emissions*, which presents the results of the Project's regional operation impact assessment. The Project would not exceed the thresholds of significance established by the MDAQMD for emissions of any criteria pollutant. Therefore, operational emissions would be less than significant.

Table 3-4: Summary of Peak Operational Emissions

Source	Emissions (pounds/day)					
	VOC	NO_X	CO	SOx	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	0.22	0.34	3.21	0.01	0.24	0.05
Area Source	0.45	0.00	0.00	0.00	0.00	0.00
Total Maximum Daily Summer Emissions	**0.67**	**0.34**	**0.01**	**0.01**	**0.24**	**0.05**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Winter						
Mobile Source	0.20	0.37	2.36	0.01	0.24	0.05
Area Source	0.45	0.00	0.00	0.00	0.00	0.00
Total Maximum Daily Winter Emissions	**0.64**	**0.37**	**2.36**	**0.01**	**0.24**	**0.05**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in an exceedance of regional thresholds. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated non-attainment under an applicable federal or state ambient air quality standard. Therefore, the proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis (Appendix A).

CO "Hot Spot" Analysis

Adverse concentrations of CO are referred to as "hot spots" which are often caused by vehicular emissions, primarily when idling at congested intersections. The MDAQMD has not established its own guidelines for CO hotspots and thus refers to the South Coast Air Quality Management District (SCAQMD) methodology. Adverse CO concentration "hot spots" occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. To establish a more accurate record of baseline CO concentrations affecting the basin, a CO "hot spot" analysis was conducted in 2003 for four (4) busy intersections in Los Angeles at the peak morning and afternoon time periods with the highest CO concentration measured at 8.4 ppm with 0.07 ppm attributed to traffic volumes and congestion at the intersection. Based on 2021 data from the Victorville-Park Avenue station, the ambient one-hour and eight-hour CO concentration within the Project study area is estimated to be 0.112 ppm and 0.098 ppm respectively. Therefore, even if the traffic volumes for the proposed Project were ten (10) times the traffic volumes generated at the Los Angeles busy intersection, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. The proposed Project would generate approximately 30 trips and would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study or based on representative SCAQMD CO

threshold considerations. Therefore, CO “hot spots” are not an environmental impact of concern for the proposed Project. Based on the preceding, localized air quality impacts related to mobile-source emissions would therefore be less than significant (Appendix A).

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact: Sensitive receptors can include long-term health care facilities, rehabilitation centers, residences, schools, playgrounds, and childcare facilities. The sensitive receptors located within the Project study area are listed below. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

- Adelanto High School, approximately 789 feet southeast of the Project site.

According to the MDAQMD Guidelines, certain project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors. The below are specified project types:

- 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 consists of a parking lot for overflow vehicle storage and as such does not include the above uses. Therefore, the Project does not require analysis for sensitive receptors. Additionally, the Project would not exceed MDAQMD significance thresholds during Project construction and long-term operation (Appendix A). Therefore, sensitive receptors in the Project study area would not be exposed to a significant air quality impact and the Project would not cause a significant human health or cancer risk to adjacent land uses, and a less than significant impact would occur.

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

Less than Significant Impact: The Project would not involve land uses that are typically associated with odor complaints such as agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project’s long-term operational uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular

intervals in compliance with the City's solid waste regulations. The Project would also be required to comply with MDAQMD Rule 402 (Nuisance) to prevent occurrences of public nuisances. Therefore, odors associated with the Project construction and operations would be less than significant and no mitigation is required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources - Would the project:				
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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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 Game or US Fish and Wildlife Service?	☐	☐	☒	☐
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?	☐	☒	☐	☐
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☒	☐	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Open Space and Conservation Element
- Title 17 – Zoning Ordinance of the Adelanto Code of Ordinances
  - Chapter 17.57 Biotic Resources
- Copart 66 Biological Resources Assessment Report. City of Adelanto, San Bernardino County. Casc Engineering and Consulting Inc. December 2023. (Appendix B)

- Copart 66 Jurisdictional Delineation Report. City of Adelanto, San Bernardino County, Casc Engineering and Consulting Inc. January 2024. (Appendix C)
- Preliminary Drainage Analysis for Copart 66 City of Adelanto, San Bernardino County. Casc Engineering and Consulting Inc. January 2025. (Appendix H)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper
- Desert Native Plant Protection Ordinance Section 88.01.060, County of San Bernardino Development Code, Chapter 88.01 Plant Protection and Management

Discussion of Impacts

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 (CDFW) or U.S. Fish and Wildlife Service (USFWS)?

Less than Significant Impact with Mitigation Incorporated: The Project site consists of four (4) parcels (APNs: 3128-341-01, 02, 04 and 06) totaling approximately 65.95 acres of vacant land located at the southwest corner of Holly Road and Racoon Avenue. Though (APN) 3128-341-01 is part of the Project site, it will not be graded thus no impacts will occur besides sidewalk and street improvements within the right of way (ROW) of Holly Road.

A Biological Resources Assessment Report was prepared for the Project by Casc Engineering and Consulting Inc. (CASC) that included a literature review, records search, and a general biological resources assessment of the Project site plus a 500 foot buffer (Survey Area) that occurred over four (4) days on April 6, 2023, November 8, 2023, November 14, 2023, and November 17,2023. A total of four (4) site visits were conducted to document existing site conditions, obtain an inventory of plant and wildlife species, map vegetation communities and current land use, determine the potential for special-status plant and wildlife resources to occur within the Survey Area, and to identify any potentially jurisdictional aquatic features. CASC's literature review identified two (2) special-status plant species and six (6) special-status wildlife species to occur within a five (5) mile radius of the Project site.

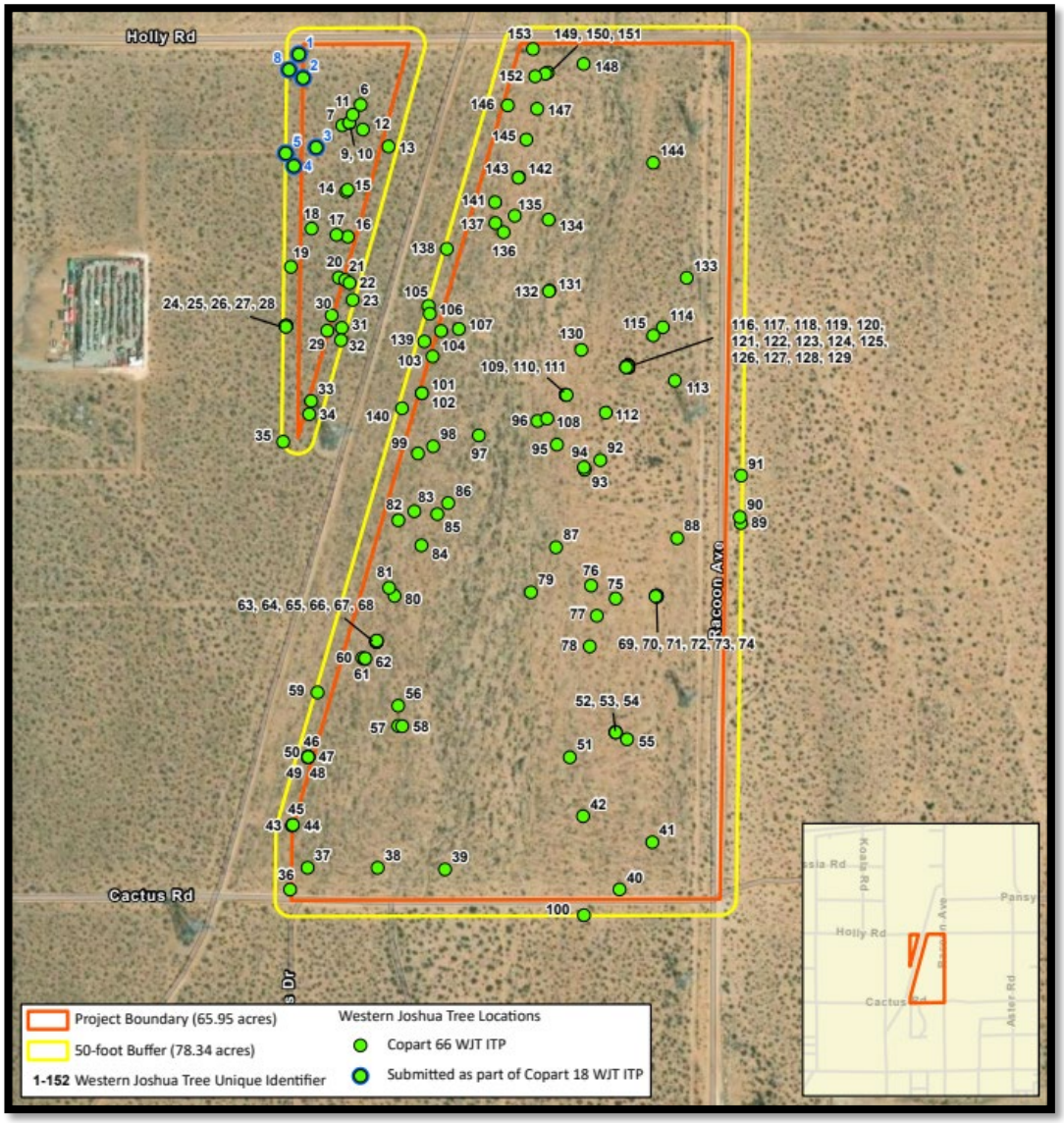
Special-Status Plant Species

Sagebrush loeflingia (*Loeflingia squarrosa var. artemisiarum*) California Rare Plant Rank (CRPR) 2B.2 (rare, threatened, or endangered in California; common elsewhere) was identified in the literature search as occurring within a 5-mile radius of the Project site. Sagebrush loeflingia is an annual herb that is native to California that prefers dunes habitat, sagebrush scrub, and creosote scrub communities. The species blooms during April and May at elevations ranging from 4,625 to 4,920 feet above mean sea level (amsl). The Survey Area is outside of the normal expected elevational range of the species given the Project site is 3,017 feet amsl and the Project Site lacks the scrub communities where this species is associated. Focused surveys for this species were not conducted during the spring blooming period. During CASC's April site visit, this species was not observed at the Project site. Therefore, this species is not expected to occur on the Project site.

Western Joshua tree (*Yucca brevifolia*) (CDFW Candidate Threatened) were observed within the Survey Area. A total of one hundred fifty-two (152) western Joshua trees were recorded on the Project site including one hundred thirty-one (131) live trees, and twenty-one (21) dead

trees (Appendix B). The locations of Western Joshua tree were recorded in accordance with the guidelines presented in the Western Joshua Tree Conservation Act (WJTCA) and are shown in *Figure 4-1 Western Joshua Tree Project Census* below. As western Joshua tree are located within the Project footprint for development, the proposed Project would result in impacts to a special status species. The proposed Project would implement Mitigation Measures **BIO-1** and **BIO-2**, as set forth below, to reduce impacts to western Joshua tree to less than significant.

Figure 4-1 Western Joshua Tree Project Census



Special-Status Wildlife Species

The western burrowing owl (*Athene cunicularia*, SSC, Locally Significant Species) is considered locally significant within the City of Adelanto and the County of San Bernardino

and is a Species of Special Concern as identified by CDFW. The species was not observed during the general biological resource surveys but has a high likelihood of occurrence on the Project site (Appendix B). Mitigation Measures **BIO-3** and **BIO-4**, as set forth below, will be implemented to ensure that no substantial adverse effect occurs to this special status species as a result of Project implementation.

The Mohave ground squirrel (*Xerospermophilus mohavensis*, ST) is a state listed threatened species and based on a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that this species has a low likelihood of occurring within the Survey Area. Though Mohave ground squirrel were not observed on the Project site during the site assessments, the site does have suitable conditions to support this species for nesting and foraging. Therefore, Mitigation Measures **BIO-5** and **BIO-6**, as set forth below, will be implemented to reduce impacts to a less than significant level.

The desert tortoise (*Gopherus agassizii*, Federally Threatened/ST) is a State and federally listed threatened species and has a low likelihood of occurrence on the Project site based on a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges (Appendix B). The desert tortoise was not observed on the Project site during field surveys performed by CASC biologists. However, the species has a low likelihood of occurring on the site and Mitigation Measure **BIO-7**, as set forth below, will be implemented to reduce impacts to a less than significant level.

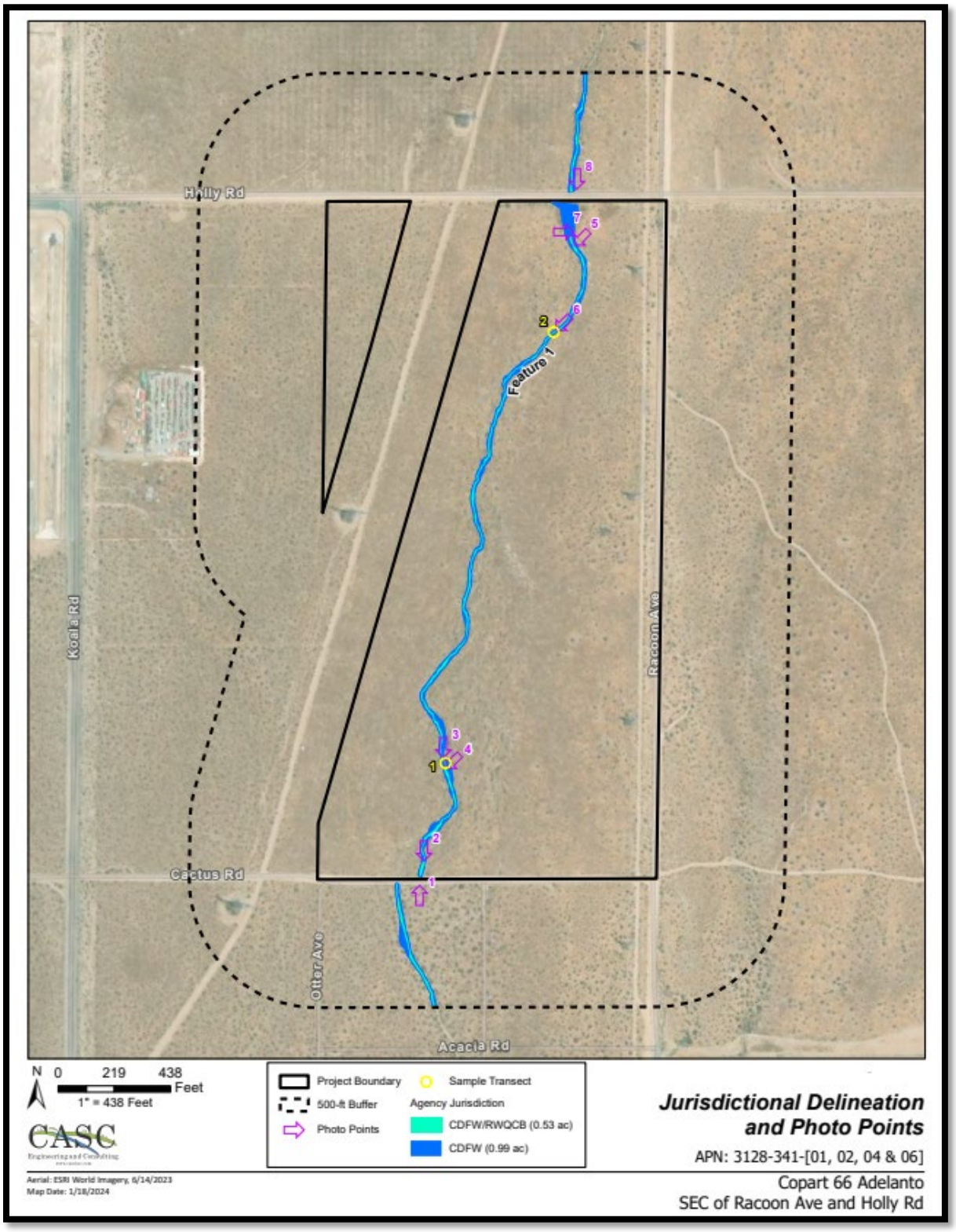
Three (3) special-status bird species loggerhead shrike, Le Conte's thrasher, and Swainson's hawk have low likelihood to occur within the Survey Area. Mitigation Measure **BIO-8**, as set forth below, will mitigate any impacts to these special-status birds to less than significant while protecting common nesting birds and providing concurrence with the Migratory Bird Treaty Act.

With the implementation of Mitigation Measures **BIO-1** through **BIO-8**, potential impacts to 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 Game or U.S. Fish and Wildlife Service, would be less than significant with mitigation incorporated.

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 Game or U.S. Fish and Wildlife Service?

Less than Significant Impact: An unnamed ephemeral drainage feature is located on the Project site and flows south to north, as shown in *Figure 4-2: Project Jurisdictional Delineation*. A Jurisdictional Delineation was performed by CASC's senior biologist on November 28, 2023, to determine jurisdictional resources of the drainage (Appendix C).

Figure 4-2 Project Jurisdictional Delineation

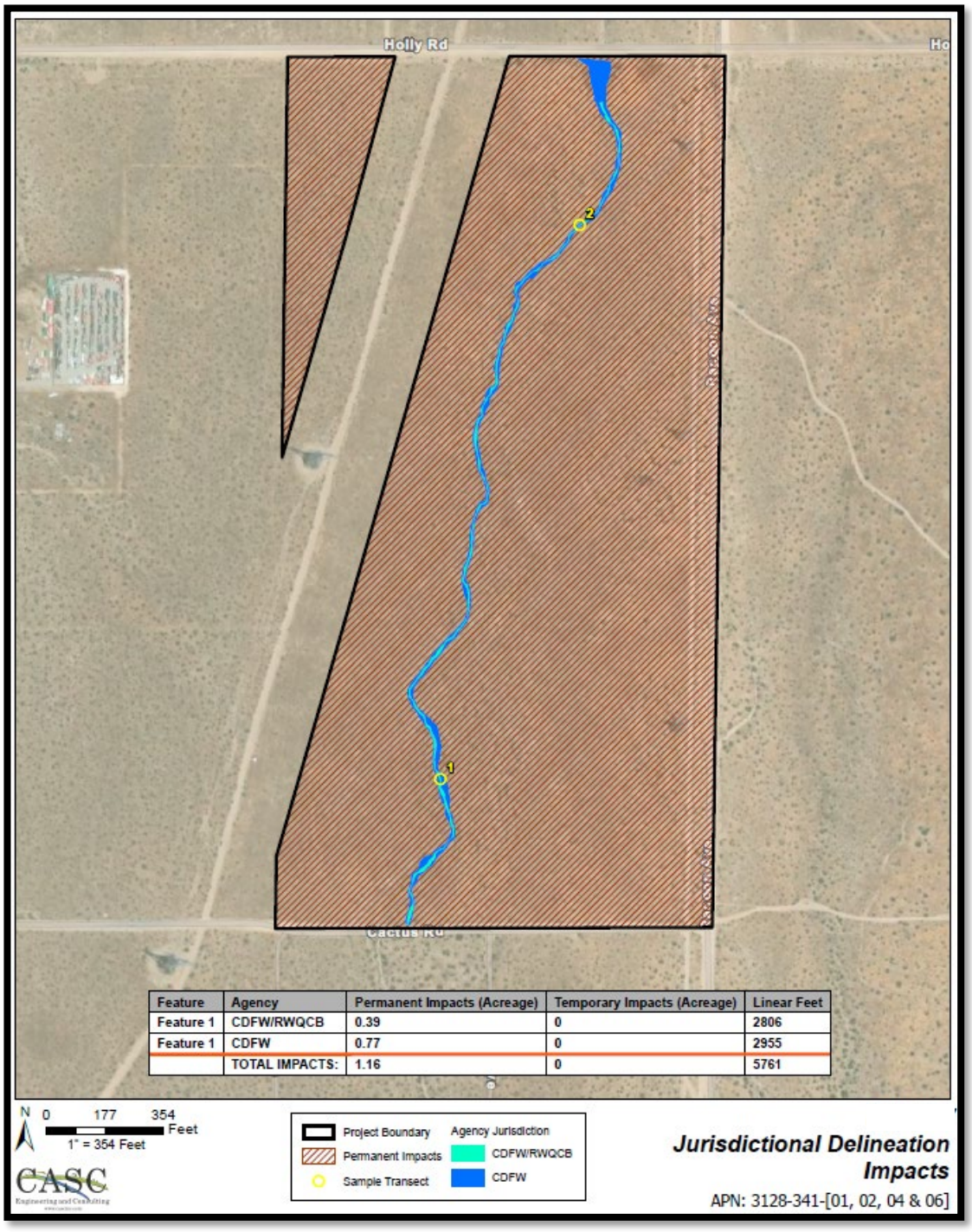


The ephemeral drainage roughly aligns with the R4SBJ riverine streambed recognized on the USFWS National Wetlands Inventory Mapper (NWI) and is mapped within the National Hydrography Dataset (NHD). The classification R4SBJ is utilized to identify characteristics of the channel, such as the fact that the channel contains flowing water only part of the year and the water regime is intermittently flooded. The historical flow of the stream has been altered by both Cactus Road and Holly Road construction in the past. Riverine features were observed where the water enters through Cactus Road and continues in a northerly direction and terminates at the northern end of the Project site where they dissipate nearer to Holly Road. No hydrophytic vegetation was observed on site and soils were primarily sandy and well drained. Given these field observations combined with the lack of hydric soils mapped in the area, the Project site does not contain any wetlands and there were no signs of riparian vegetation, ponding, or riparian habitat (Appendix C). Therefore, the Project would not have a substantial adverse effect on riparian habitat, or other sensitive natural communities and impacts are anticipated to be less than significant.

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?

Less than Significant Impact with Mitigation Incorporated: As described in the preceding, the Project site contains an ephemeral drainage feature that flows south to north from Cactus Road to Holly Road. The ephemeral drainage located within the Project boundary contains 0.39 acres (2,806 linear feet) of potentially non-wetland waters of the State that are subject to Regional Water Quality Control Board (RWQCB) jurisdiction, and 1.16 acres (5,761 linear feet) of unvegetated streambed and vegetated banks potentially subject to CDFW jurisdiction (Appendix C). The proposed Project would redirect the ephemeral stream to a proposed 200-foot-wide drainage corridor located onsite and would result in permanent impacts to the stream onsite contained within the Project boundary, see *Figure 4-3: Jurisdictional Delineation Impacts*.

Figure 4-3: Jurisdictional Delineation Impacts



To reduce impacts to the onsite stream, Mitigation Measures **BIO-9** and **BIO-10** will be implemented to require permitting with the RWQCB and CDFW. With the implementation of Mitigation Measures **BIO-9** and **BIO-10**, the proposed Project would not 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 and a less than significant impact would occur with mitigation incorporated.

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?

Less than Significant Impact with Mitigation Incorporated: The Project site does not function as a designated wildlife corridor within the County of San Bernardino. The western Joshua trees that are located onsite have the potential to be suitable "habitat" for wildlife species, specifically birds. Pursuant to the Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The Project would implement Mitigation Measure **BIO-8,** as set forth below, to reduce potential impacts to any nesting birds to a less than significant level. Furthermore, no wetlands exist on the Project site that can support migratory fish. Finally, the Project site is not a designated nursery site according to the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (USFWS). Therefore, impacts to the movement of any native resident or migratory fish or wildlife species are less than significant with mitigation incorporated.

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

Less than Significant Impact with Mitigation Incorporated: Section 17.57 of the City's Zoning Ordinance requires new development within the City to prepare a biotic resources study and to adhere to the requirements of the County of San Bernardino for the relocation of Joshua Trees if applicable. As stated in the preceding, the Biological Resources Assessment prepared for the Project identified a total of 131 live western Joshua trees on the Project site. Mitigation Measures **BIO-1** and **BIO-2**, as set forth below, would be implemented to reduce impacts to western Joshua tree to a less than significant level by requiring an Incidental Take Permit from CDFW and a California Desert Native Plants Act Protection and Relocation Plan in the event Joshua tree would be preserved in place through avoidance or relocation. Therefore, with the implementation of Mitigation Measures **BIO-1** and **BIO-2**, the proposed Project would not conflict with any local policies or ordinance protecting biological resources and impacts would be less than significant with mitigation incorporated.

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?

Less than Significant Impact with Mitigation Incorporated: The City participates in the West Mojave Plan Habitat Conservation Plan (WMPHCP). Species covered under the plan that would potentially be impacted by the Project include western burrowing owl, Mohave ground squirrel and desert tortoise. The incorporation of Mitigation Measures **BIO-3** through **BIO-7**, as set forth below, would reduce impacts to these species to a less than significant level through avoidance measures. Therefore, the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation

Plan, or other approved local, regional, or state habitat conservation plan. Impacts are anticipated to be less than significant with mitigation incorporated.

Mitigation Measures

Mitigation:

BIO-1: Incidental Take Permit from CDFW

The Applicant shall apply to CDFW for take authorization for western Joshua tree (WJT) through issuance of an Incidental Take Permit (ITP) prior to issuance of grading permits. The Applicant shall follow all mitigation requirements defined in the Project ITP. Application and supporting documentation shall be submitted to CDFW for review and approval for removal of WJTs on the Project site. An ITP establishes a performance standard requiring that the impacts be "minimized and fully mitigated" with measures that are roughly proportional in extent to the impact of the authorized taking of the species (Fish & G. Code § 2081(b); Cal. Code Regs., tit. 14, §§ 783.2-783.8). Therefore, additional mitigation measures, such as the purchase of credits from an approved conservation or mitigation bank, land acquisition, or entry into a conservation easement, will be determined in consultation with CDFW to meet ITP requirements.

BIO-2: California Desert Native Plants Act Protection and Relocation Plan

If mitigation measures of the ITP (BIO-1) include preservation in place through avoidance or relocation, then a California *Desert Native Plant Protection and Relocation Plan* (CDNPA) for those trees proposed for relocation or preservation shall be composed which will provide detailed specifications for the proposed treatment, avoidance, or relocation of all western Joshua trees and those desert species included under the CDNPA. Other native desert species included for protection under CDNPA includes smoke trees (*Cotinus* sp.), species in the Agavacea family, mesquite (*Prosopis* sp.), and large creosote bushes (*Larrea* sp.). Further, the CDNPA will provide measures to meet the requirements of CEQA.

BIO-3: Pre-Construction Western Burrowing Owl Clearance Surveys

In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), two (2) pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. Once surveys are completed, the qualified biologist shall prepare a final report documenting surveys and findings. If no burrowing owls or occupied burrows are detected, Project construction activities may begin. If an occupied burrow is found within the Project site during pre-construction clearance surveys, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to the County, which may consult with CDFW for review, prior to initiating Project construction activities.

BIO-4: Passive and Active Relocation of Western Burrowing Owls

If western burrowing owls are observed on the Project site during preconstruction surveys, CDFW shall be immediately notified to determine if avoidance of the nest is appropriate until the nest is vacated or to gain concurrence from CDFW on active

or passive relocation actions. All passive or relocation activities shall be in concurrence with CDFW guidelines (Staff Report on Burrowing Owl Mitigation 2012).

If burrowing owls are present and nesting on-site the following steps shall be necessary to reduce impacts to less than significant. These steps may be augmented by recommendations from CDFW:

a. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that: (1) owls have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

b. A qualified biologist shall exclude all owls from active burrows using one-way doors. Concurrently, all inactive burrows and other sources of secondary refuge for burrowing owls shall be collapsed and removed from the site.

c. Following and 24 to 48-hour observation period, all vacated burrows shall be collapsed.

d. A qualified biologist shall conduct a post-exclusion survey confirming the absence of burrowing owls on the Project site. Should newly occupied burrows be discovered on the Project site the exclusion activities shall be repeated.

BIO-5: **Pre-Construction Survey for Mohave Ground Squirrel Survey**
In accordance with the *California Department of Fish and Game Mohave Ground Squirrel Survey Guidelines* (July 2010) a qualified biologist with a Memorandum of Understanding (MOU) from CDFW shall perform a pre-construction one-day visual site assessment to determine the potential for Mohave ground squirrel to occur on the Project site and if trapping surveys are warranted. The pre-construction survey can be performed any time of year, however, the optimal time to perform a visual survey to determine activity and habitat quality is from 15 March through 15 April.

Prior to visiting the Project site, the qualified biologist will perform a literature search for all recent and historical records within the region of the Project site. Once on site, if the biologist observes conditions that are conducive to supporting Mohave ground squirrel, a trapping session may be necessary to determine presence/absence (See BIO-6 below). If the qualified biologist observes Mohave ground squirrel during the pre-construction visual survey, the Project site will be considered “occupied” and notification will be sent to CDFW. Mitigation for impacts to Mohave ground squirrel will then be negotiated with CDFW.

BIO-6: **Mohave Ground Squirrel Presence/Absence Trapping Surveys**
Mohave ground squirrel trapping shall be authorized by a MOU or Letter Permit issued by the Wildlife Branch of the Department, or by another permit as determined by the Department and shall be undertaken only by a qualified biologist. A qualified biologist is a biologist who has demonstrated pertinent field experience in capturing

and handling ground squirrels or other small mammals in desert/arid communities and who has been permitted by the Department to work without supervision. Each biologist setting traps, opening traps containing captured animals, or handling captured animals must be named in the MOU or Letter Permit as an authorized person, whether qualified or not to work without supervision.

Visual surveys to determine Mohave ground squirrel activity and habitat quality shall be conducted during the period of 15 March through 15 April. All potential habitat on a Project site shall be visually surveyed during daylight hours by a biologist who can readily identify the Mohave ground squirrel and the white-tailed antelope squirrel (*Ammospermophilus leucurus*).

One sampling grid consisting of 100 Sherman livetraps (or equivalent; the minimum length of any trap is 12 inches) shall be established for each 80 acres, or fraction thereof, of potential Mohave ground squirrel habitat on the Project site. The traps shall be arranged in a 10 x 10 grid, with 35-meter spacing between traps.

Each sampling grid shall be trapped for a minimum of five consecutive days unless a Mohave ground squirrel is captured before the end of the five-day term on the grid or on another grid on the Project site. If no Mohave ground squirrel is captured on a sampling grid on the Project site in the first five-consecutive-day term, each sampling grid shall be sampled for a SECOND five-consecutive-day term. Trapping may be stopped before the end of the second term if a Mohave ground squirrel is captured on any sampling grid on the Project site. If no Mohave ground squirrel is captured during the second five-consecutive-day term, each sampling grid shall be sampled for a THIRD five-consecutive-day term.

The FIRST trapping term shall begin and be completed in the period of 15 March through 30 April. If a SECOND term is required, it shall begin at least two weeks after the end of the first term, but shall begin no earlier than 01 May, and shall be completed by 31 May. If a THIRD term is required, it shall begin at least two weeks after the end of the second term, but shall begin no earlier than 15 June, and shall be completed by 15 July. All trapping shall be conducted during appropriate weather conditions, avoiding periods of high wind, precipitation, and low temperatures (less than 50 degrees Fahrenheit).

BIO-7: **Desert Tortoise Presence/Absence Survey**

A resource agency approved biologist will conduct desert tortoise presence/absence protocol level surveys by walking transects no greater than 15-feet in width over the entire Project site to gain 100% visual access. An assessment of a buffer zone is also required to complete the presence/absence survey. If desert tortoises are observed on the Project site or within the buffer area the resource agencies will be contacted immediately for further direction.

A final Desert Tortoise Presence/Absence Report will be submitted to the Client, CDFW, and USFWS. The report will discuss the survey methodology, transect width, duration, conditions, and results of the survey. GPS will be used to record potential

or occupied burrows. Representative site photographs with a photo point location map will also be included in the final report.

BIO-8: Nesting Bird Preconstruction Surveys

If it is not feasible to avoid the nesting bird season (typically January through July for raptors and February through August for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or directly adjacent to the Project site. If active nests are located, the extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, the nesting bird survey shall occur no earlier than 30 days prior to the commencement of construction.

In the event active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

BIO-9: Waste Discharge Requirements (WDRs) Application

As described on page 20 of the Jurisdictional Delineation Report prepared by CASC Engineering and Consulting, dated January 2024 (Appendix C), the Applicant shall submit the application form, *Application: Discharges of Dredged or Fill Material to Waters of the State*, and applicable fees to the Regional Water Quality Control Board (RWQCB) at least 45 days prior to the commencement of construction activities.

BIO-10 Streambed Alteration Agreement

As described on page 20 of the Jurisdictional Delineation Report prepared by CASC Engineering and Consulting, dated January 2024 (Appendix C), the Project Applicant shall submit a *Notification of Lake or Streambed Alteration* and associated permit filing fees to CDFW prior to issuance of grading permits. Effective September 1, 2020, all notifications for Standard Agreements must be submitted through CDFW's Environmental Permit Information Management System (EPIMS) Permitting Portal.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those outside of formal cemeteries?	☐	☒	☐	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - 6.0 - Open Space and Conservation Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.12 – Cultural Resources
- Title 17 – Adelanto Zoning Ordinance of the Adelanto Municipal Ordinance
  - Chapter 17.15.070 – Industrial Design Standards
- Cultural/Paleontological Resources Services for the Copart Raccoon Avenue Project Located in Adelanto, County of San Bernardino, California (DUKE Project Number C-0467). DUKE Cultural Resources Management. May 2, 2023. (Appendix D)

Discussion of Impacts

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

Less than Significant Impact: A Cultural and Paleontological Resources Assessment was prepared by Duke Cultural Resources Management (Duke CRM) dated May 2, 2023, for the proposed Project (Appendix D). On September 28, 2022, Duke CRM staff performed a records search with the South-Central Coastal Information Center (SCCIC) which included a review of all recorded cultural resources within a ½ mile radius of the Project, as well as a review of known cultural resource survey and excavation reports. The records search identified seven (7) cultural resources within ½ mile of the Project, with one (1) historic resource recorded twice. The nearest resource is located approximately 245 feet north of the Project site and contains a historic refuse deposit and possible remnants of a homestead. All seven (7) cultural resources identified within ½ mile of the Project site have unknown National Register of Historic Preservation (NRHP) eligibility.

On February 7, 2023, Duke CRM archaeologist conducted a pedestrian field survey of the entire Project area. Vegetation onsite consisted of western Joshua trees and scattered bushes. No cultural or paleontological resources were observed during the field survey. As a result of negative findings during the SCCIC records search and field survey, Duke CRM

concluded that the Project site has a low potential to impact cultural resources (Appendix D). Furthermore, the Project site is currently vacant and there are no known historically or culturally significant resources, structures, buildings, or objects located within the Project area. The Project site does not contain any previously recorded cultural and/or paleontological resources. In addition, the property has been disturbed by grading and motor vehicle use on the site. Thus, the Project site would not cause an adverse change in the significance of a historical resource and impacts to historic resources would be less than significant.

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

Less than Significant Impact with Mitigation Incorporated: As concluded in the Cultural and Paleontological Resources Assessment prepared by Duke CRM (Appendix D), the Project area does not contain previously recorded cultural and/or paleontological resources. Although, it is not anticipated that unknown cultural resources exist on-site, Mitigation Measures **CUL-1**, **CUL-2**, and **CUL-3** as set forth below, would be implemented to ensure that in the event that unanticipated resources are encountered during grading activities, impacts are reduced to a level below significance. Therefore, implementation of the Project is not anticipated to result in a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5 of the CEQA Guidelines and a less than significant impact would occur with mitigation incorporated.

c) Disturb any human remains, including those outside of formal cemeteries?

Less than Significant Impact with Mitigation Incorporated: Duke CRM conducted a review of online historical aerial photographs and historical USGS quad maps utilizing University of California, Santa Barbara Frame Finder, historicaerials.com, and USGS Historical Topographic Map Explorer. Upon review of the images dating back to 1952, DUKE did not identify possible formal or informal cemeteries in the area. Therefore, a low likelihood exists that human remains could be uncovered during ground-disturbing activities. However, these findings do not preclude the existence of previously unknown human remains located below the ground surface, which may be encountered during construction excavations associated with the proposed Project. As a result, Mitigation Measures **CUL-1**, **CUL-2**, and **CUL-3** as set forth below, has been identified to reduce potentially significant impacts to previously unknown human remains that may be unexpectedly discovered during project implementation to a less than significant level. Consistent with State law, if at any time during grading activities human remains are found, the Project is to be conditioned to halt work and contact the San Bernardino County Coroner's Office. Based on compliance with existing regulations and the implementation of Mitigation Measures **CUL-1**, **CUL-2**, and **CUL-3** the Project's potential to disturb human remains is considered less than significant with mitigation incorporated.

Mitigation Measures

Mitigation:

CUL-1: Inadvertent Finds

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 Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) 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.

CUL-2 Monitoring and Treatment Plan

If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within **TCR-1**. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

CUL-3 Findings of Human Remains or Funerary Objects

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

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy – Would the project:				
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Sources:

- Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Open Space and Conservation Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Copart Adelanto Energy Analysis City of Adelanto. Urban Crossroads, Inc. May 8, 2023. (Appendix E)

Discussion of Impacts

a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact: The proposed Project would impact energy resources during construction and operation. The construction activities for the Project would include site preparation, grading, building construction, paving, and architectural coating. The Project would consume energy resources during construction in three (3) general forms:

1) Petroleum-based fuels used to power off-road construction vehicles and equipment on the Project site, construction worker travel to and from the Project site, as well as delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities).

2) Electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and,

3) Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Urban Crossroads prepared an Energy Analysis dated May 8, 2023, to quantify anticipated energy usage associated with construction and operation of the Project, and to determine if the usage amounts are efficient, typical, or wasteful for the proposed land use type.

Construction Related Impacts

The construction phase of the Project would result in energy consumption in the form of fuel and electricity. Fuel consumption would result from construction tools and equipment, vendor and haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Construction would occur in phases and would use specific corresponding equipment with each phase. Construction activities and corresponding fuel energy consumption would be temporary and localized. Construction equipment used by the Project would result in a single event consumption of approximately 25,522 gallons of diesel fuel, as shown in *Table 6-1: Construction Fuel Consumption Estimates* (Appendix E).

Table 6-1: Construction Equipment Fuel Consumption Estimates

Construction Activity	Duration (Days)	Equipment	Amount	Hours Per Day	Total Fuel Consumptions
Site Preparation	6	Rubber Tired Dozers	3	8	1,143
		Crawler Tractors	4	8	334
Grading	15	Excavators	2	8	177
		Graders	1	8	394
		Rubber Tired Dozers	1	8	952
		Scrapers	2	8	2,634
		Crawler Tractors	2	8	403
Building Construction	154	Cranes	1	8	7,088
		Forklifts	3	8	3,276
		Generator Sets	1	8	690
		Tractors/Loader/ Backhoes	3	8	6,209
		Welders	1	8	1,379
Paving	11	Pavers	2	8	324
		Paving Equipment	2	8	305
		Rollers	2	8	130
Architectural Coating	11	Air Compressors	1	8	84
Construction Fuel Demand (Gallons Diesel Fuel)					**25,522**

Urban Crossroads, Inc. analyzed the energy implications of the construction phase of the Project, specifically the power cost from on-site electricity consumption during construction. The total Project construction power cost is the summation of the products of the area (sf) by the construction duration and the typical power cost. The 2022 National Construction Estimator identifies a typical power cost per 1,000 square-feet of construction per month of $2.50, which was used to calculate the Project's total construction power cost. The total power cost of the on-site electricity usage during construction of the Project is estimated to be approximately $50,311.80. The Southern California Edison (SCE) general service rate schedule was used to determine the Project's electrical usage, as SCE will be the electricity provider for the site. As of March 1, 2023, SCE's general service rate is $0.13 per kilowatt hours (kWh) of electricity for industrial services. The total electricity usage from on-site Project construction related activities is estimated to be approximately 387,014 kWh. Therefore, there are no unusual Project characteristics that would cause construction equipment to be less energy efficient compared with other similar construction sites in the State. Additionally, Project construction equipment would conform to the applicable CARB emissions standards, which results in fuel efficient equipment.

Operational Related Impacts

Energy consumption activities during the operation phase of the Project include transportation energy demands (energy consumed by passenger car and truck vehicles accessing the Project site) and facility energy demands (energy consumed by site maintenance activities). The Project's operational energy demands are estimated to result in 2,518,465 kWh/year of electricity, and there is no natural gas usage associated with the proposed Project. Annual vehicle trips related to the operations of the Project are expected to result in a net increase of 308,543 annual miles travelled, which is an estimated 13,228 gallons of fuel consumption. The Project proposes conventional industrial uses reflecting contemporary energy efficient and energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other industrial uses of similar scale and configuration.

As supported by the preceding, Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, based on the results of the Energy Analysis prepared by Urban Crossroads, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems (Appendix E). The Project would therefore not cause or result in the need for additional energy-producing or energy transmission facilities. The Project would not create or otherwise result in a potentially significant impact affecting energy resources or energy delivery systems, and a less than significant impact would occur.

b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?

Less Than Significant Impact: The applicable state plans that address renewable energy and energy efficiency are CAL Green, the California Energy Code, and California's Renewable Portfolio Standard. Under the California Renewables Portfolio Standard, the State of California is transitioning to renewable energy through the California's Renewable Energy Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered

carbon neutral. Executive Order S-1408, signed in November 2008, expanded the state's renewable portfolios standard (RPS) to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS which are 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. Senate Bill 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. On September 10, 2018, Governor Brown signed SB 100, which supersedes the SB 350 requirements. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. The bill also established a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under SB 100 the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The statewide RPS goal is not directly applicable to individual development projects, but to utilities and energy providers such as SCE, which is the utility company that would provide all electricity needs for the Project. Additionally, the Project would comply with the Building Energy Efficiency Standards (Title 24) and CAL Green. Therefore, implementation of the Project would not conflict or obstruct plans for renewable energy. Thus, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils – Would the project:				
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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Sources:

- Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - 2.0 – Land Use and Community Design
  - 8.0 - Public Health and Safety
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)

- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
    - 3.1 – Earth Resources
    - 3.3 – Water Resources
- County of San Bernardino HZ-1 Earthquake Fault Zones Countywide Plan Policy Map (October 2020)
- County of San Bernardino HZ-2 Liquefaction and Landslides Policy Map (October 2020)
- Cultural/Paleontological Resources Services for the Copart Racoon Avenue Project, Located in Adelanto, County of San Bernardino, California (DUKE Project Number C-0467). Duke Cultural Resources Management, LLC. May 2, 2023. (Appendix D)
- Preliminary Soils and Infiltration/Percolation Feasibility Investigation APNs 3128-341-01, -02, -04, and -06 Adelanto, California. LOR Geotechnical Group, Inc. September 9, 2022. (Appendix F)

Discussion of Impacts

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 Alquist-Priolo Earthquake Fault Zoning Act (Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act requires the State Geologist to establish regulatory zones, known as "Alquist-Priolo (AP) Earthquake Fault Zones," around the surface traces of active faults and to issue appropriate maps. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (typically 50 feet).

The Project site is not included within any Earthquake Fault Zones as created by the Alquist-Priolo Earthquake Fault Zoning Act. Additionally, the Helendale Fault is the closest identified Alquist-Priolo Earthquake Fault Zone to the Project site and is located approximately 16 miles northeast of the Project site. As there are no known faults located on the Project site and there is no evidence of faulting, the potential for the proposed Project to expose people or structures to adverse effects related to ground rupture is low. Therefore, a less than significant impact would occur.

ii. Strong seismic ground shaking?

Less than Significant Impact: The Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. However, as stated under Section VII. (i) above, the Project site is not located within an Alquist-Priolo Earthquake Fault Zone. City. The risk of ground shaking at the Project site is not considered substantially different than that of other properties within the City. As a mandatory condition of Project approval, the City will require that structures be constructed in accordance

with the 2019 California Building Code (CBC), Title 24, and the City Building Code, which are designed to preclude significant adverse effects associated with strong seismic ground shaking. The future structures and workers on the Project site have the potential to be exposed to strong seismic ground shaking associated with seismic events. Adherence to the recommendations outlined in the City's General Plan and Municipal Code, as well as conditions of approval and the 2019 California Building Code (CBC) Guidelines that are currently adopted by the City, will ensure potential impacts related to strong seismic shaking are less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact: Liquefaction is a phenomenon associated with shallow groundwater combined with the presence of loose, fine sands, and/or silts within a depth of 50-feet below grade or less. Liquefaction occurs when saturated, loose, fine sands and/or silts are subjected to strong ground shaking resulting from an earthquake event. Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. An increase in duration of ground shaking during a seismic event can also increase the potential for liquefaction.

According to the City's 2035 Comprehensive Sustainable Plan, liquefaction conditions are more likely to exist along the Mojave River which is approximately 9 miles east of the Project site. Additionally, the Project site is not located in or near a zone susceptible to liquefaction as dictated on the County of San Bernardino HZ-2 Liquefaction and Landslides Policy Map. The site is underlain by alluvial soils, and groundwater under the site is anticipated to lie approximately 214 feet below the ground surface (Appendix F). Therefore, liquefaction is not considered to be a design concern for the Project, a less than significant impact would occur.

iv. Landslides?

Less than Significant impact: Seismically induced landslides and slope failures are common occurrences during or soon after large earthquakes. According to County of San Bernardino HZ-2 Liquefaction and Landslide Policy Map, the Project site is not located within an area that has potential for earthquake-induced landslides. Additionally, the Project site and surrounding areas are relatively flat. Project implementation would not directly or indirectly induce risk of landslide, and a less than significant impact would occur.

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

Less than Significant Impact: Construction activities associated with the Project would involve earth movement and the exposure of soil, which would temporarily increase erosion susceptibility. In the long-term, development of the subject property would increase impervious surface cover on the Project site, thereby reducing the potential for erosion and loss of topsoil that currently occurs on the undeveloped site. The Project would be required to adhere to standard regulatory requirements, including, but not limited to, requirements of the City's National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which requires adoption of an appropriate Storm Water Pollution Prevention Plan

(SWPPP) and implementation of Best Management Practices (BMPs) to reduce erosion from storm water runoff. Based on the preceding, potential impacts associated with erosion or changes in topography, including loss of topsoil are considered 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 with Mitigation Incorporated: Based on exploratory borings performed by LOR Geotechnical Group, Inc., the Project site is underlain by alluvial soils consisting of medium dense to very dense, brown silty sand, well graded sand, poorly graded sand, and sandy silt. Due to the loose alluvial soils, the existing site conditions will not provide uniform and/or adequate support for the proposed Project (Appendix F). Therefore, Mitigation Measure **GEO-1** will be implemented to ensure the Project will comply with the applicable recommendations outlined in the Geotechnical Investigation prepared by LOR Geotechnical Group as set forth below. Furthermore, the Project will comply with all applicable provisions of the Uniform Building Code (UBC) and California Building Code (CBC) that would act to minimize any unstable soils or unstable geologic units that may be encountered. On this basis, the potential for the Project to 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 landslides, lateral spreading, subsidence, liquefaction or collapse is less than significant with mitigation incorporated.

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 contain significant amounts of clay particles that swell considerably when wet and shrink when dry. Foundations constructed on these soils are subject to uplifting forces caused by swelling. Without proper mitigation measures, building foundations and slabs-on-grade could result in heaving and cracking of both. LOR Geotechnical Group performed laboratory tests on a representative sample of the near surface soils at the Project site. The laboratory results indicate that existing onsite soils near the surface of the Project site have very low expansion potential (Appendix F). Therefore, the subsurface soils at the Project site are considered non-expansive and a less than significant impact would occur.

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 Project site is serviced by the City of Adelanto Public Utility Authority (APUA) for potable water and sewage. The Project does not propose to utilize a septic tank or alternative wastewater disposal system. Therefore, no impact will occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact: A Cultural and Paleontological Resources Assessment was prepared by Duke Cultural Resources Management (Duke CRM) dated May 2, 2023 (Appendix D). Duke CRM requested that the Western Science Center (WSC) perform a paleontological records search for known fossil localities within, and in the vicinity of, the Project site. On January 12, 2023, the WSC found that there have been no paleontological resources discovered within the Project area or within a one (1) mile search radius of the Project site. The geology in the vicinity of the Project has been mapped by Dibblee (1960) and Dibblee and Minch (2008). A review of the map indicates that the proposed Project site is located on alluvial sand and gravel of Holocene age (Qa). Holocene alluvial units are considered to be of high preservation value, but material found at the Project site is unlikely to be fossil material due to the relatively recent associated dates of the deposits. Given that the sediments are Holocene in age and the Project would likely only impact more recent sediments, it is unlikely important paleontological resources would be uncovered at the Project site (Appendix D). Therefore, the Project is considered to have a low potential to impact paleontological resources, and a less than significant impact would occur.

Mitigation Measures

Mitigation:

GEO-1: Grading and Construction

The Project shall incorporate the recommendations provided in the Preliminary Soils Investigation prepared by LOR Geotechnical Group, Inc., dated September 9, 2022 (Appendix F). The recommendations are located on pages 5-12 of the report and are presented under the following subheadings: General Site Grading, Preparation of Fill Areas, Engineered Compacted Fill, Short-term Excavations, Soil Expansiveness, Sulfate Protection, Exterior Flatwork, Preliminary Pavement Design and Construction monitoring.

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

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Open Space and Conservation Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.2 – Climate and Air Quality
- Raccoon Avenue Greenhouse Gas Analysis City of Adelanto. Urban Crossroads, Inc. May 8, 2023. (Appendix G)

Discussion of Impacts

a) Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact: Urban Crossroads conducted a Greenhouse Gas (GHG) Analysis for the proposed Project, dated May 8, 2023 (Appendix G). The analysis provides the estimated GHG emissions that will result from Project construction and operation. Construction related GHG emissions are quantified and amortized over the life of the Project, which is identified as a 30-year period, in accordance with the MDAQMD which follows the South Coast Air Quality Management District (SCAQMD) recommendation. Project operational emissions would consist of mobile source emissions, area source emissions, energy source emissions, on-site cargo handling equipment emissions, and solid waste management.

The City of Adelanto has not adopted its own numeric threshold of significance for determining impacts due to GHG emissions and defers to the MDAQMD thresholds of significance. The MDAQMD states that in general for GHG emissions, the significance emission threshold of 100,000 Tons CO2e (90,718.5 MT CO2e) per year is sufficient to determine if additional analysis is required. As shown in *Table 8-1: Project Greenhouse Gas Emissions Summary*, construction and operation of the Project would generate a total of 530.58 MTCO2e/year (Appendix G).

Table 8-1: Project Greenhouse Gas Emissions Summary

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2E
Annual construction-related emissions amortized over 30 years	13.32	3.50E-04	8.30E-04	4.62E-03	13.58
Mobile Source	114.60	0.00	0.01	0.21	116.43
Area Source	0.00	0.00	0.00	0.00	0.00
Energy Source	398.27	0.04	0.00	0.00	400.57
Total CO_2E (All Sources)			**530.58**		

The Project would result in approximately 530.58 MTCO2e/year and would not exceed the screening threshold of 90,718 MTCO2e year. Therefore, Project related emissions would not have a significant direct or indirect impact on greenhouse gas emissions and climate change, and a less than significant impact would occur.

b) 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 would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. Applicable plans adopted for the purpose of reducing GHG emissions include the California Air Resources Board (CARB) Scoping Plan. Urban Crossroads conducted a consistency analysis that is provided in Section 3.7 of Appendix G and the results of the consistency analysis are summarized below.

CARB Scoping Plan

In November 2022, CARB released the Final 2022 Scoping Plan Update, which identifies the State's progress towards the statutory 2030 target, while providing a path towards carbon neutrality and reduce greenhouse gases emissions by 85% below 1990 levels by 2045. Recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40% below 1990 levels by 2030. The Project would not conflict with any of the 2022 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG's 2016-2040 RTP/SCS was adopted April 7, 2016. The RTP/SCS identifies multimodal transportation investments, including bus rapid transit, light rail transit, heavy rail transit, commuter rail, high-speed rail, active transportation strategies (e.g., bike ways and sidewalks), transportation demand management strategies, transportation systems management, highway improvements (interchange improvements, high-occupancy vehicle lanes, high-occupancy toll lanes), arterial improvements, goods movement strategies, aviation and airport ground access improvements, and operations and maintenance to the

existing multimodal transportation system. The RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers. Upon approval by the City, the Project will be consistent with the general plan land use designation, density, building intensity, and applicable policies specified for the Project area in SCAG's Sustainable Community Strategy/ Regional Transportation Plan. Therefore, a less than significant impact related to GHG emissions from Project construction and operation would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Public Health and Safety Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)

- 3.5 – Noise
- City of Adelanto Local Hazard Mitigation Plan (May 2020)
- Envirostor, Department of Toxic Substances Control, 2019. Accessed April 5, 2023. https://www.envirostor.dtsc.ca.gov/public/
- FHSZ Viewer, The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP), accessed April 5, 2023. https://egis.fire.ca.gov/FHSZ/

Discussion of Impacts

a) 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 proposed Project site is currently vacant, undeveloped and includes a utility easement that bisects the site diagonally north-south. The Project would construct a parking lot for the storage of totaled vehicles of all types (cars, trucks, rv's, etc.) to be sold via online auctions and/or stored throughout the insurance claim process. Project implementation would not cause routine transport, use, or disposal of hazardous materials. However, equipment used and stored at the site during Project construction and operation would utilize substances considered to be hazardous by regulatory bodies, such as diesel fuel and gasoline. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements. Project construction and operational activities are required to strictly adhere to federal and state requirements. The use, transport, storage, and disposal of hazardous materials must comply with existing regulations established by several agencies, including the Department of Toxic Substances Control (DTSC), the U.S. Environmental Protection Agency (EPA), the US Department of Transportation (USDOT), the Occupational Safety & Health Administration (OSHA), the California Code of Regulations (Cal OSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The amount of hazardous material discharged during construction is expected to be less than significant, and the Project would be required to comply with applicable laws, ordinances, and procedures. Thus, Project impacts would be 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: As discussed in Section IX(a), any handling activities associated with hazardous or potentially hazardous materials would comply with all applicable federal, state, and local agencies and regulations. Additionally, both short-term construction and long-term operation of the proposed Project would comply with all applicable federal, State, and local agencies and regulations with the policies and programs established by agencies such as the EPA, Department of Transportation, Department of Toxic Substances Control, Cal/OSHA, Resource Conservation and Recovery Act (RCRA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. Adherence to the applicable policies and programs of these agencies would ensure that any transport or interaction with hazardous materials would occur in the safest possible manner, reducing the opportunity for the accidental release of hazardous materials into the environment. Any handling of hazardous materials would be limited in both quantities and concentrations. Based on the preceding, impacts would be less than significant.

c) 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: The Project site is located 0.14 miles north of Adelanto High School which is located at the northeast corner of Calendula Road and Mojave Drive. Project construction is anticipated to handle and use diesel fuel and gasoline for the use of off-road equipment for site preparation and grading. Additionally, Project operation is expected to handle diesel fuel and gasoline for off-road equipment for the transport of totaled vehicles around the proposed storage parking lot. As discussed in the preceding sections, handling activities associated with hazardous or potentially hazardous materials would comply with all applicable federal, state, and local agencies and regulations. Furthermore, the proposed Project does not include any uses that would emit hazardous emissions or handle acutely hazardous materials and any handling of hazardous materials such as gasoline and diesel fuel would be limited in both quantities and concentrations. Though the Project site is located within one-quarter mile of a school, the proposed Project would comply with all applicable federal, state, and local regulations regarding the handling and storage of hazardous materials and thus, a less than significant impact would occur.

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?

No Impact: Government Code Section 65962.5 describes that before an application for a development project is completed, the Applicant and/or Lead Agency shall indicate whether the site is included on any of the lists compiled pursuant to that section and identify which list(s). According to the Cortese List (DTSC, EnviroStor 2019), the Project site is not included on a list of hazardous materials sites. Nor are there any hazardous materials sites listed in the vicinity of the Project site. Therefore, the proposed Project would not create a significant hazard and no impact 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?

Less than Significant Impact: The closest airport to the Project site is the Southern California Logistics Airport (SCLA) located approximately 4.0 miles northeast of the Project site. The Project site is located in the southeastern boundary of the Southern California Logistics Airport Comprehensive Land Use Plan (SCLA). The SCLA Comprehensive Land Use Plan identifies future noise contour boundaries and identifies the 65 dBA CNEL contour as the threshold of incompatibility. The Project site is located outside the 65 dBA CNEL contour boundaries and will therefore not experience aircraft-related noise levels greater than 65 dBA CNEL. Therefore, the proposed Project is considered a compatible use per the SCLA Comprehensive Land Use Plan, and no further analysis is required. A less than significant impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan

or emergency evacuation plan?

Less than Significant Impact: The City adopted its Local Hazard Mitigation Plan (HMP) in May 2020. The HMP requires the proposed Project to comply with the City's Emergency Operations Plan. The Project site and immediate surroundings do not contain emergency shelters or facilities. Additionally, the Project does not involve construction or operational characteristics which would interfere or impact emergency response or evacuation of the Project site or immediate surrounding area. Egress and ingress to the Project site will be maintained on Cactus Road and Holly Road, and circulation on-site is provided to comply with City and County requirements. Therefore, potential impacts to the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan would be less than significant and no mitigation would be required.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than Significant Impact: Impacts associated with wildland fires are also addressed in Section XX, *Wildfire,* of this Initial Study. The potential for wildland fires represents a hazard, particularly within areas adjacent to open space or within close proximity to wild-urban interface areas. The proposed Project would remove the desert vegetation that currently occupies the Project site. Additionally, the Project would comply with the California Fire Code. The San Bernardino County Fire Station 322 is located approximately 1.2 miles northeast of the Project site. Compliance with the San Bernardino County Fire Department's regulations and policies would ensure that the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
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 which would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Chapter 7 – Public Facilities and Infrastructure
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- City of Adelanto Municipal Code
  - Chapter 17.93 – Erosion and Sediment Control
- 2020 Urban Water Management Plan, City of Adelanto. August 25, 2021.

- FEMA Flood map Service Center, Federal Emergency Management Agency. Accessed June 1, 2023.
- Storm Water Management Program (SWMP) for the Mojave River Watershed. August 2003.
- Preliminary Drainage Analysis for Copart 66, City of Adelanto, San Bernardino County, California. Casc Engineering and Consulting, January 2025. (Appendix H)

Discussion of Impacts

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant Impact: The proposed Project site will be graded and paved with rock-ballast surfacing and will include the construction of a parking lot storage yard, one (1) detention basin, a trapezoidal channel, and fencing. Off-site improvements include asphalt pavement, curb and gutter, three (3) commercial driveways, and sidewalk along Holly Road, Racoon Avenue, and Cactus Road. Stormwater will flow as it has historically and be directed via sheet flow to the detention basin located adjacent to the northern perimeter of the site, south of Holly Road. Additionally, offsite flows will be directed to the proposed trapezoidal channel along the southern proposed right-of-way of the site and will flow north through a 220 feet drainage corridor which will then outlet to Holly Road as it has historically.

The proposed Project site is located in the Mojave River Watershed which has been issued an NPDES Permit (Phase II MS4 General Permit) for regulated small Municipal Separate Storm Water Systems (MS4s) by the State Water Resources Control Board. The General Permit requires construction projects that disturb over one (1) acre of land to implement a project specific Storm Water Pollution Prevention Plan (SWPPP) that identifies erosion and sediment control BMPs. The proposed Project would disturb over one (1) acre of land and thus is required to implement a SWPPP which will include a Soil Erosion and Sediment Control Plan to reduce the volume of stormwater runoff and potential pollution loads in stormwater runoff to the maximum extent possible.

Casc Engineering and Consulting prepared a Preliminary Drainage Analysis dated January 2025 for the proposed Project (Appendix H). The purpose of the Preliminary Drainage Analysis is to analyze the existing and proposed hydrological conditions of the site during a 10-year and 100-year storm event and to determine any necessary drainage improvements required. The 100-year peak flow rate under existing site conditions is 35.76 cubic feet per second (cfs) from watershed “A”. Under proposed Project conditions, the site will generate a 100-year peak flow rate of 48.69 cfs from watershed “A”. There will be an increase in 100-year flows due to the conversion of pervious surfaces to impervious surfaces at the Project site.

The proposed grading and drainage designs of the Project are anticipated to protect onsite improvements from a 100-year storm event and would not cause adverse impacts to downstream drainage conditions, and the site will continue to drain as it has historically. Flows will be directed via sheet flow towards the proposed detention basin at the northern end of the site, and offsite flows will be directed to the proposed trapezoidal channel. The proposed Project conforms with the conditions related to water quality standards and waste

discharge requirements which reduces the potential to substantially degrade surface or groundwater quality. Thus, a less than significant impact would occur.

b) Substantially decrease 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 is serviced by the Adelanto Water Department, through the Adelanto Public Utility Authority (APUA). The APUA's water supply is obtained entirely from groundwater located in the Alto Subarea of the Mojave Basin Area. Future supply forecasts show that the City may need to obtain water from the Mojave Water Agency, which also gets its water from groundwater supplies. The City's municipal water system extracts its water supply from the underground aquifers through seven (7) potable active wells and one (1) non-potable well throughout the City. Additionally, the City has nine (9) inactive wells that may be returned to service in future years if need be. According to the City's Urban Water Management Plan (UWMP), Adelanto has reliable supplies to meet its retail customer demands in normal, single dry years, and five consecutive dry year conditions through 2045.

Development of the proposed Project would increase the amount of impervious surface on-site which could reduce the amount of water percolating down into the underground Alto Subarea aquifer that underlies the Project site and a majority of the City. However, the Project's proposed drainage system which includes one (1) detention basin, a drainage corridor, and a trapezoidal channel would accommodate onsite flows during storm events and would allow the percolation of storm water. Furthermore, the proposed Project does not include the connection to wet utilities and thus would not substantially decrease groundwater supplies. Therefore, the proposed Project would not impede the sustainable groundwater management of the groundwater basin and a less than significant impact would occur.

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 which would:

i) result in substantial erosion or siltation on- or off-site;

Less than Significant Impact: The proposed Project site historically drains south to north via sheet flows and is currently undeveloped with zero percent impervious surfaces. The proposed Project would not alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site. Site flows will be conveyed into the proposed detention basin at the northern end of the site via sheet flow, and offsite flows will be conveyed to the proposed trapezoidal channel along the southerly site boundary and be conveyed to Holly Road. The proposed development provides enough volume to capture the entire runoff volume generated from a 100-year storm event and does not release any runoff off-site for up to a 100-year storm event (Appendix H). Furthermore, the Project would implement a soil erosion plan as part of the Project SWPPP which will identify BMPs to be installed to prevent substantial soil erosion on and offsite. Therefore, a less than significant

impact would occur.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or

Less than Significant Impact: As indicated in section i) above, the proposed Project includes a combination of an above ground infiltration basin and channel to capture the increase onsite flows as a result of Project implementation. The proposed drainage designs are anticipated to protect on-site improvements in the event of a 100-year storm without causing adverse impacts to downstream drainage conditions. Therefore, Project implementation would have a less than significant impact on surface runoff both on- and offsite.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact: The Project proposes enough volume to capture the entire runoff volume generated from a 100-year storm event and will not release any runoff off-site for up to a 100-year storm event. To store the volume, the development proposes a combination of an above ground detention basin and a trapezoidal channel. Furthermore, the Project would implement BMPS outlined in the Project SWPPP to reduce the potential for pollutants to enter runoff. Therefore, the Project would not negatively impact downstream conditions and Project impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact: The Project site is not located in a flood hazard, tsunami, or seiche zone as the Pacific Ocean is located over 70 miles southwest of the Project site. Consequently, there is no potential for tsunamis to impact the Project. In addition, no steep hillsides subject to mudflow are located on or near the Project site. The Project site is not located within a dam inundation area and there is no levee located within the vicinity of the Project site. There is no potential for inundation. Accordingly, the Project site has no potential to be impacted by seiches, mudflows, and/or tsunamis. No impact would occur.

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

Less than Significant Impact: The proposed Project will implement a SWPPP which will include a Soil Erosion and Sediment Control Plan as required by Section 17.93.050 of the City's Municipal Code. With the implementation of BMPs as approved by the City, the volume of stormwater runoff and potential pollution loads in stormwater runoff will be reduced to the maximum extent possible. Thus, the Project will comply with City water quality control plans and sustainable groundwater management plans and impacts will be less than significant.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - 2.0 - Land Use and Community Design Element
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.7 – Land Use

Discussion of Impacts

Would the project:

a) Physically divide an established community?

No Impact: According to the City's General Plan Land Use and Zoning Map, the Project site is designated as Manufacturing/Industrial (MI). The Project site is currently vacant with a minor fenced area for storge located in the central portion of the site. The surrounding areas include vacant land and manufacturing/distribution uses to the north, warehouse/storage uses to the west, vacant land and a City of Los Angeles Division of Water and Power easement to the east, and vacant land to the south. Therefore, no established communities exist within the Project site, nor does the Project propose or require elements or operations that would divide an off-site community. Based on the preceding, the Project would not physically divide an established community and no impact would occur.

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?

Less Than Significant Impact: The Project site is designated Manufacturing/Industrial (MI) in the City of Adelanto General Plan and is zoned accordingly. This designation supports a wide range of industrial uses, including vehicle storage yards, which are permitted with approval of a Conditional Use Permit (CUP). The proposed Project does not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project would not result in a significant environmental impact due to such a conflict, and impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources – Would the project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Chapter 6 - Open Space and Conservation Element
- Final Program Environmental Impact Report City of Adelanto (May 1995)
  - 3.1 – Earth Resources
  - 3.5 – Natural Resources
- California Department of Conservation, Mineral Land Use Classification. Accessed April 6, 2023.
- County of San Bernardino NR-4 Mineral Resource Zones Policy Map (October 2020)

Discussion of Impacts

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?

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?

a-b) No Impact: According to the County of San Bernardino NR-4 Mineral Resources Zone Policy Map, the Project site is located in an MRZ-3a zone for aggregate resources and is part of the 1994 Open File Reports (OFR) 94-04 and 92-06. However, the Project site is not located within an area known to be underlain by regionally- or locally-important mineral resources. Furthermore, the Project site is not located in a Significant Mineral Aggregate Resource Area (SMARA). The nearest mineral resources zones are located in the northern and eastern portions of the City and are classified as MRZ-3. Accordingly, implementation of the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State of California. Additionally, there are no resource recovery sites delineated within the Project vicinity or surrounding areas. Therefore, the proposed Project would not result in the loss of availability of locally important mineral resources and no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Noise – Would the project result in:				
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?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Public Health and Safety Element
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.5 - Noise
- Title 9 – Adelanto Municipal Code
  - Chapter 9.110 Noise Control
- Racoon Avenue Noise Impact Analysis City of Adelanto. Urban Crossroads, Inc. April 24, 2023. (Appendix I)

Discussion of Impacts

Would the project result in:

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: The scale for measuring the intensity of noise is the decibel scale (dBA), and each interval of 10 dBA indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. The most common sounds vary between 60 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three (3) feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA at approximately 1,000 feet which can cause discomfort. As some land uses are

more tolerant of noise than others, each zoned district within the City has an applicable ambient noise standard that correlates to the land uses of that zone. The Project site has a land use designation and zoning designation of Manufacturing/Industrial (MI) and is adjacent to manufacturing/industrial land uses to the west, northwest, and northeast. According to Title 9, Section 9.110.050 of the City's Municipal Code, all industrial zones have an ambient noise measurement standard of 65 dB(A) at any time.

The proposed Project would produce noise that is associated with industrial uses such as outdoor storage activity, gate activity and the receiving area. A Noise Analysis was prepared by Urban Crossroads dated April 24, 2023 to determine the potential noise impacts of the proposed Project (Appendix I). Anticipated noise level increases as a result of the implementation of the Project were evaluated based on the Appendix G CEQA Guidelines at the closest sensitive receptors. Listed below are the closest sensitive receptors to the Project site with a distance measured in a straight line from the Project boundary to each receiver location:

- Adelanto High School located at 15620 Joshua Road, approximately 2,721 feet southeast of the Project site.
- Single family residence located at 10608 Anton Place, approximately 6,452 feet southeast of the Project site.
- Single family residence located at 10512 Dawn Street, approximately 6,390 feet southeast of the Project site.

Construction Related Impacts

The proposed Project would conform to the City's permitted construction hours of 7:00 a.m. to dusk on weekdays, with no construction allowed on weekends or holidays without prior consent from the City. The FTA Transit Noise and Vibration Impact Assessment Manual was utilized to outline the procedures for assessing noise impacts during the construction phase of the Project. Construction for the proposed Project would occur in several stages, and each stage would have specific types of equipment and thus its own noise characteristics. To describe Project noise construction activities, reference construction noise levels from the Federal Highway Administration (FHWA) published by the Roadway construction Noise Model (RCNM) were utilized for each stage of the Project, see *Table 13-1: Construction Reference Noise Levels*.

Table 13-1: Construction Reference Noise Levels

Construction Stage	Reference Construction Equipment	Reference Noise Level at 50 Feet (dBA Leq)[1]	Combined Noise Level (dBA Leq)2	Combined Sound Power Level (PWL)[3]
Site Preparation	Dozer	78	83.4	115.1
	Front End Loader	75		
	Grader	81		
Grading	Excavator	77	84.0	115.6

	Tractor	80		
	Scraper	80		
Building Construction	Crane	73	77.4	109.1
	Backhoe	74		
	Generator	70		
Paving	Paver	74	77.8	109.5
	Dump Truck	72		
	Roller	73		
Architectural Coating	Man Lift	68	76.2	107.8
	Air Compressor	74		
	Generator	70		

To evaluate whether the Project would generate potentially significant short-term noise levels at the nearest receiver locations, the City's Municipal Code Section 17.90.020 requires that construction equipment shall not generate noise exceeding 65 dBA Leq. The construction noise analysis, as shown in *Table 13-2: Construction Equipment Noise Level and Significance Thresholds Summary,* shows that the nearest receiver locations will not exceed the reasonable daytime 65 dBA Leq significance threshold during Project construction activities. Therefore, impacts due to Project construction noise are considered less than significant at all receiver locations as all construction noise levels are expected to range from 31.2 to 50.2 dBA Leq (Appendix I).

Table 13-2: Construction Equipment Noise Level and Significance Thresholds Summary

Receiver Location	Construction Noise Levels (dBA Leq)					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels
R1	49.7	50.2	43.6	44.1	42.4	50.2
R2	38.6	39.1	32.5	33.0	31.3	39.1
R3	38.5	39.0	32.4	32.9	31.2	39.0
Significance Threshold	65	65	65	65	65	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Operational Related Impacts

An Operation Noise Analysis was performed by Urban Crossroads for the proposed Project to describe noise level impacts associated with the typical daytime and nighttime activities at the Project site, see Section 7 of Appendix I. The on-site Project related noise sources are expected to include outdoor storage activity, gate activity, and the receiving area. The proposed hours of operation for the facility are expected to be limited to the daytime hours between 8:00 a.m. to 5:00 p.m. Monday through Friday and employees will only be onsite on an "as needed" basis to assist with the incoming delivery and collection of vehicles.

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the

development of the proposed Project. *Table 13-3: Operational Reference Noise Level Measurements* provides the parameters for reference noise level measurements to estimate the Project's operational noise impacts. Additionally, projected operational noise levels analyzed by Urban Crossroads assumed the worst-case noise environment which would be the outdoor storage activity, gate activity and receiving area all operating at the same time (Appendix I). These activities, however, will likely vary throughout the day.

Table 13-3: Operational Reference Noise Level Measurements

Noise Source	Noise Source Height (feet)	Min./Hour		Reference Noise Level (dBA Leq at 50 feet)	Sound Power Level (dBA)
		Day	Night		
Outdoor Storage Activity	6	60	0	61.7	93.4
Gate Activity	6	60	0	61.6	93.3
Receiving Activity	10	60	0	68.5	100.2

Using the reference noise levels to represent the proposed Project operations, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and Project related noise level increases that would be experienced at each of the sensitive receptor locations. *Table 13-4: Daytime Project Operational Noise Levels and Thresholds Summary* shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. and whether they exceed the significance threshold specified by the City's Municipal Code Section 17.90.020 at 65 dBA. The daytime hourly noise levels at the off-site sensitive receiver locations are expected to range from 28.9 to 40.8 dBA Leq, which does not exceed the daytime and nighttime exterior noise level standards. Therefore, operational noise impacts are considered less than significant at the nearby noise-sensitive receiver locations.

Table 13-4: Daytime Project Operational Noise Levels and Significance Thresholds Summary

Noise Source	Operational Noise Levels by Receiver Location (dBA Leq)		
	R1	R2	R3
Outdoor Storage Activity	34.0	22.6	22.5
Gate Activity	0.0	0.0	0.0
Receiving Area	39.8	28.0	27.8
Total (All Noise Sources)	**40.8**	**29.1**	**28.9**
Significance Threshold	65	65	65
Threshold Exceeded?	**No**	**No**	**No**

b) Generation of excessive ground borne vibration or ground borne noise levels?

Less than Significant Impact: Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. It is possible to estimate the potential for human response (annoyance) and building damage due to ground borne vibrations using vibration assessment methods defined by the FTA including vibration source levels for construction equipment. Ground vibration levels associated with various types of construction equipment are summarized in *Table 13-5: Vibration Source Levels for Construction Equipment*.

Table 13-5: Vibration Source Levels for Construction Equipment

Equipment	PPV (in/sec) at 25 feet
Small Bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large Bulldozer	0.089
Vibratory Roller	0.210

Using the above-mentioned vibration source levels of construction equipment, and the construction vibration assessment methodology published in the FTA, Urban Crossroads estimated the anticipated Project vibration impacts (Appendix I). Nearby receiver locations were located at distances ranging from 2,721 to 6,425 feet from the Project site. The expected Project related vibration velocity levels during construction at the nearby receiver locations are estimated to be 0.000 PPV in/sec. Based on maximum acceptable continuous vibration threshold of 0.2 PPV (in/sec), the vibration levels associated with Project construction will fall below the building damage thresholds at all the sensitive receiver locations. Therefore, the Project-related vibration impacts are considered less than significant during typical construction activities at the Project site.

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?

Less than Significant Impact: The closest airport to the Project site is the Southern California Logistics Airport (SCLA) located approximately 4.0 miles to the northeast and has the potential to expose the Project site to aircraft related exterior noise levels. The Southern California Logistics Airport Comprehensive Land Use Plan identifies future noise contour boundaries and identifies the 65 dBA CNEL contour as the threshold of incompatibility and noise levels below 65 dBA CNEL are considered compatible with underlying land uses. The Project site is located outside the 65 dBA CNEL contour boundaries and will therefore not experience aircraft-related noise levels greater than 65 dBA CNEL. Therefore, the proposed Project is considered a compatible use per the SCLA Comprehensive Land Use Plan and no further analysis is required. A less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing – Would the project:				
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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Land Use and Community Design Element
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.10 – Population
  - 3.11- Housing
- City of Adelanto General Plan Land Use and Zoning Map (December 1, 2022)

Discussion of Impacts

Would the project:

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)?

Less than Significant Impact: CEQA Guidelines Section 15126.2(e) states growth-inducing impacts are not assumed to be beneficial, detrimental, or of little significance to the environment, but that a proposed project should be assessed in how it could foster economic growth or population growth, or the construction of additional housing, either directly or indirectly. The most immediate presence of potential growth related to the proposed Project would be the labor force associated with the construction and operation of the proposed totaled vehicle parking lot. The Project does not propose any new residential development and would not directly contribute to population growth within the City.

Project-related employment demands would likely be filled by the existing personnel pool within the City and neighboring communities, with little or no measurable increase in the City's resident population. Significant population growth is therefore not anticipated to result from Project implementation. Upon approval of a CUP the Project is consistent with the

City's General Plan Land Use Designation and zoning designation of Manufacturing/Industrial (MI). Although the Project will include infrastructure improvements such as paving along the Project frontage, curb, gutter, and sidewalk, these improvements would be concentrated to the immediate surroundings of the Project site and are unlikely to encourage unanticipated population growth. Based on the preceding, the potential for the Project to induce substantial growth directly or indirectly is considered less than significant.

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

No Impact: The Project site is currently vacant, undeveloped and no houses exist within the Project site. Additionally, the Project does not propose uses or activities that would otherwise displace housing assets or persons. Based on the preceding, the proposed Project would have no impact related to displacement of housing or people.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services – Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan
  - Land Use and Community Design Element
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.9 – Public Services
- City of Adelanto Local Hazard Mitigation Plan (May 2020)

Discussion of Impacts

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

i) Fire protection?

Less than Significant Impact: Fire protection services to the Project site are provided by the San Bernardino County Fire Department. The Project site is served by the San

Bernardino County Fire Station 322 which is located approximately 1.1 miles northeast of the Project site and is the only fire station within the City limits. The proposed Project does not include the construction or modification of fire protection facilities. The Project would be constructed to current building code requirements regarding fire suppression and access and would be subject to the review and approval of the San Bernardino County Fire Department. The Project may result in a demand for incremental fire protection services which would be offset through the payment of City of Adelanto Development Impact Fees paid by the Applicant, a portion of which are allocated for fire protection services. Based on the foregoing, the proposed Project would receive adequate fire protection service and would not result in the need for new or physically altered fire protection facilities. Impacts to fire protection facilities would be less than significant.

ii) Police protection?

Less than Significant Impact: Police protection services for the City are provided by the San Bernardino County Sheriff's Department. The Project site is served by the Victorville Patrol Station, located at 11613 Bartlett Avenue, approximately 3.1 miles northeast of the site. The proposed Project would introduce a new parking lot for the storage of totaled vehicles of all types. Employees would be onsite on an as needed basis for vehicle deliveries and collection. The proposed Project would result in an incremental increase in demand for police protection services. However, the Project is not anticipated to require or result in the construction of new or physically altered police facilities. Additionally, incremental police protection service demands generated by the Project are offset through Project payment of City of Adelanto Development Impact Fees by the Applicant. Based on the foregoing, the proposed Project would receive adequate police protection service, and would not result in the need for new or physically altered police protection facilities. Impacts on police protection facilities would be less than significant.

iii) Schools?

Less than Significant Impact: The Project site is located within the Adelanto Elementary School District and the Victor Valley Union High School District. Nearby schools include Adelanto High School approximately 0.14 miles southeast of the Project site, Victoria Magathan Elementary School approximately 1.7 miles east of the Project site, and Columbia Middle School approximately 1.6 miles southeast of the Project site. The proposed Project would not create a direct demand for public school services, as the Project does not include residential uses. However, the Project may contribute indirectly to the demand for public school services if Project employees and their school age children relocate to school districts serving the City. Project impacts would be incremental and would be offset through Project payment of City of Adelanto Development Impact Fees. As the Project would not directly generate students and indirect impacts would be incremental, the Project would not cause or contribute to a need to construct new or physically altered public school facilities, and Project impacts on schools would be less than significant.

iv) Parks?

No Impact: The proposed Project would not increase the demand for public park facilities and would not result in the need to modify existing or construct new park facilities. As discussed in Section 3.16 *Recreation* of this Initial Study, the Project does not include any type of residential use or other land use that may generate a population that would increase the demand for public park facilities. As such, implementation of the proposed Project would not adversely affect parks and public facilities or require the construction of new or modified public facilities, and no impact would occur.

v) Other public facilities

No Impact: Demand for public facilities is generated by the population within a facility's service area. The Project would not induce population growth and therefore would not create a demand for public facilities/services, including libraries, community recreation centers, post offices, and animal shelters. As such, implementation of the proposed Project would not adversely affect or require the construction of new or modified public facilities, and no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Chapter 6.0 – Open Space and Conservation Element
  - Chapter 7.0 - Public Facilities and Infrastructure Element

Discussion of Impacts

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?

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?

a-b) No Impact: The Applicant proposes to construct a 65.95-acre parking lot for the storage of totaled vehicles of all types including cars, trucks, rv's, etc. The Project does not include any type of residential use or other land use that may generate a population that would increase the utilization of existing neighborhood and regional parks or other recreational facilities. Accordingly, implementation of the proposed Project would not result in substantial physical deterioration of an existing neighborhood or regional park. The Project does not include any new on- or off-site recreation facilities, nor the expansion of any existing off-site recreational facilities. Thus, environmental effects related to the use, construction, or expansion of recreational facilities would not occur with implementation of the proposed Project. No impact on recreational facilities would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Transportation/Traffic – Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - 4.0 – Mobility Element
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.13 – Traffic and Circulation
- City of Adelanto General Plan Circulation Map (2023)
- Holly Road and Raccoon Avenue Trip Generation Analysis, City of Adelanto. TJW Engineering, Inc. May 1, 2023. (Appendix J)

Discussion of Impacts

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than Significant Impact: A Trip Generation Analysis was prepared by TJW Engineering, Inc. dated May 1, 2023 (Appendix J) for the proposed Project. The purpose of the Trip Generation Analysis was to assess the potential transportation impacts resulting from the development of the proposed Project both in the context of the California Environmental Quality Act (CEQA) and the County of San Bernardino Transportation Impact Study Guidelines. The County of San Bernardino Guidelines state land uses that generate less than 50 peak hour trips do not require a Traffic Impact Study (TIS) which would include a Level of Service (LOS) analysis. The Project proposes an operation of ten (10) trucks per day to haul totaled vehicles to the proposed storage parking lot. Based on the proposed operation of ten (10) trucks per day, the Project is projected to generate four (4) total AM peak hour trips, four (4) total PM peak hour trips, and thirty (30) total daily trips. Therefore,

the Project is anticipated to generate less than fifty (50) peak hour trips and does not require a Traffic Impact Analysis (TIA) that includes LOS analysis (Appendix J). In addition, the County guidelines outline that projects generating less than 110 daily vehicle trips may be presumed to have a less than significant impact on VMT and be screened from VMT analysis. Furthermore, offsite improvements such as sidewalk, curb and gutter, and asphalt pavement are consistent with the City ordinance. Therefore, the Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, impacts would be less than significant.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant Impact: CEQA Guidelines Section 15064.3 subdivision (b) regards Vehicle Miles Traveled (VMT) and whether the land use project will generate vehicle miles traveled in excess of an applicable threshold of significance. As discussed in section (a) above, the Project is screened out of VMT analysis according to County of San Bernardino Transportation Impact Study Guidelines as it would generate less than fifty (50) peak hour trips per day. Therefore, the Project can be presumed to result in a less than significant VMT impact under the screening criteria (Appendix J). The Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b), a less than significant impact would occur.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact: The Project would not result in any major modifications to the existing access or circulation features. The proposed Project does not include any sharp curves or traffic intersection crossings. Therefore, the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, a less than significant impact would occur.

d) Result in inadequate emergency access?

Less than Significant Impact: The proposed Project is compatible with the design and operation of the street network and would not result in any major modifications to the existing access or circulation features. The Project proposes two (2) paved, gated commercial driveways off of Cactus Road to provide access to the eastern side of the Project site, and one (1) paved, gated commercial driveway off of Holly Road to provide access to the northwestern portion of the Project site. The proposed commercial driveways accommodate traditional fire apparatus, allowing for adequate emergency access. The Project would not result in inadequate emergency access to the Project site. Thus, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) 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.	☐	☒	☐	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2041)
  - 6.0 - Conservation Element
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.12 Cultural Resources
- Cultural and Paleontological Resources Services for the Copart Raccoon Avenue Project, Located in Adelanto, County of San Bernardino, California. Duke Cultural Resources Management, LLC. May 2, 2023. (Appendix D)

Findings of Facts: As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1, and 21080.3.2 require public agencies to consult with California Native American tribes recognized by the Native American Heritage Commission (NAHC) for the purpose of mitigating impacts to tribal cultural resources. This law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions.

In accordance with Public Resources Code Section 21080.1(d), a lead agency is required to provide formal notification of intended development projects to Native American tribes that have requested to be on the lead agency's list for receiving such notification. The formal notification is required to include a brief description of the proposed Project and its location, lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation for tribal cultural resources.

On January 30, 2025, the City, as Lead Agency, initiated the AB 52 process by notifying five (5) tribes traditionally or culturally affiliated with the Project area or who requested notice for all City projects. Notified contacts included representatives from the Agua Caliente, Soboba, Serrano Nation, Yuhaaviatam of San Manuel Nation (YSMN), and Morongo. The YSMN requested consultation and additional information on February 14, 2025, this request was forwarded to Casc Engineering and Consulting on April 9, 2025. Subsequently, the Cultural Paleontological Resources Assessment, site plan, and Preliminary Soils Investigation were sent to YSMN on April 9, 2025. In response, they provided mitigation measures on April 21, 2025. Morongo requested an extension of the 30-day period on April 26, 2025; however, as of May 21, 2025, no additional mitigation measures have been received.

Discussion of Impacts

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Less than Significant Impact: A Cultural Resources Assessment was prepared by Duke CRM, dated May 2, 2023, for the proposed Project (Appendix D). As a component of the Cultural Resources Assessment, Duke submitted an inquiry to the State of California Native American Heritage Commission (NAHC) to ascertain the presence of known sacred sites, Native American cultural resources, and/or Native American human remains within the boundaries of the proposed Project site. The NAHC response letter dated January 23, 2023, indicated no Native American cultural resources have been identified within the general vicinity of the Project location (Appendix D). No known Tribal Cultural Resources (TCRs) that are 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), have been identified or associated with the Project site. The Project would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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 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). Therefore, Project impacts would be less than significant.

b) 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: As previously mentioned, YSMN provided mitigation measures **TCR-1** and **TCR-2** (as set forth below) on April 21, 2025. In the event tribal cultural resources are identified as significant, Mitigation Measures **TCR-1** and **TCR-2** will be implemented to ensure that any resources inadvertently unearthed during ground disturbing activities will be assessed by a qualified archaeologist. Therefore, impacts are anticipated to be less than significant with mitigation incorporated.

Mitigation Measures

Mitigation:

XVIII. (b)

TCR-1: Pre-Contact Cultural Resources

The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in **CUL-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 YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site.

TCR-2 Archaeological/ Cultural Documents

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 YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the project.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems – Would the project:				
a) Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - 7.0 – Public Facilities and Infrastructure
- Final Program Environmental Impact Report City of Adelanto General Plan Update (May 1995)
  - 3.15 – Utilities
- City of Adelanto 2020 Urban Water Management Plan (August 25, 2021)
- City of Adelanto Code of Ordinances, Title 8 Health and Sanitation
  - Chapter 8.01 – Collection of Solid Waste
- County of San Bernardino IU-5 Waste Disposal and Landfills Policy Map (October 2020)
- CalRecycle Industrial Section Generation Rates. Estimated Solid Waste Generation Rates (ca.gov)

Discussion of Impacts

Would the project:

a) Require or result in the relocation or construction of new or expanded water or 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: Water and sewer services are provided to the City by the Adelanto Public Utility Authority. Electrical services are provided to the City by Southern California Edison and natural gas services are provided by the Southwest Gas Corporation. The proposed Project would construct a parking lot for the storage of totaled vehicles of all types including cars, trucks, rv's, etc. and would serve as an overflow storage site for the main Copart Adelanto site which is located 0.3 miles east of the Project site. Proposed drainage improvements include one (1) detention basin at the northern portion of the site, south of Holly Road, and a trapezoidal channel at the southern portion of the site that will capture off-site flows and direct to a proposed 220-foot-wide drainage corridor that will outlet to Holly Road. The proposed Project does not include the construction, relocation, or extension of wet or dry utilities at the Project site. Therefore, environmental impacts related to the construction and relocation of utility facilities would not occur, and thus impacts would be less than significant.

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

No Impact: As described in section XIX. (a) above, the Applicant does not propose the construction, relocation, or extension of utilities to the Project site. Therefore, the Project would not require water services during normal, dry, or multiple dry years and as such, no impacts would occur.

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?

No Impact: As described in Section XIX. (a) above, the proposed Project does not propose the extension or construction of sewer services as no utilities are proposed in the Project. The proposed drainage improvements at the Project site will direct flows as they have historically from south to north towards the proposed detention basin and to an outlet on Holly Road. As such, impacts on wastewater treatment providers would be nil and no impact would occur.

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?

Less than Significant Impact: Solid waste services are provided to the City by AVCO Disposal, Inc., which is a Burrtec Company. The closest landfill to the Project site is the Victorville Landfill located at 17080 Stoddard Wells Road, Victorville and is located approximately 10.6 miles east of the Project site. In accordance with the California Integrated Waste Management Act of 1898 (AB939), 50 percent of solid waste generated by the City is required to be diverted away from landfills either through waste reduction, recycling, or other means. Additionally, every business that generates four

(4) or more cubic yards of solid waste in the City is required divert its commercial solid waste from disposal by separating recyclables from solid waste in accordance with Section 8.01.101 of the City of Code of Ordinances. Based on the CalRecycle Industrial Section Generation Rates chart, the 66-acre Project would generate approximately 69.1 pounds of solid waste per day, see *Table 19-1: Estimated Solid Waste Generation*. Daily waste generation was calculated estimating an average of five (5) employees onsite on an ”as needed” basis and producing approximately 13.82 pounds of waste per employee, per day based off the Industrial Sector Generation Rate for Warehouses.

Table 19-1: Estimated Solid Waste Generation

Waste Generation Source	Number of Employees	Generation Rate, pounds per day	
		Pound Per Employee	Total
Industrial	5	13.82	69.1
Source: CalRecycle, 2019b, Estimated Solid Waste Generation Rates (ca.gov)			

The industrial uses proposed by the Project, and solid waste generated by those uses, would not otherwise conflict with federal, state, and local statutes and regulations related to solid waste. Based on the preceding, the potential for the Project to 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 is less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact: The Project would be implemented and operated in compliance with applicable City General Plan Goals and Policies, and would conform with City zoning regulations—specifically, the Project would comply with local, state, and federal initiatives and directives acting to reduce and divert solid waste from landfill waste streams. As described in section 3.19(d) above, the Project would comply with the California Integrated Waste Management Act of 1989 (AB 939) and AB 341 as implemented by the City. The proposed Project is required to comply with all applicable federal, state, County, and City statues and regulations related to solid waste as a standard project condition of approval. Therefore, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire – If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Sources:

- City of Adelanto North 2035 Comprehensive Sustainable Plan (August 27, 2014)
  - Public Health and Safety Element
- California Department of Forestry and Fire Protection. Fire Hazard Severity Zone Viewer (2007 Map)
- County of San Bernardino HZ-5 Fire Hazard Severity Zones Countywide Policy Map (October 2020)
- County of San Bernardino HZ-4 Flood Hazards Countywide Plan Policy Map (October 2020)
- City of Adelanto Local Hazard Mitigation Plan (May 2020)
- Preliminary Drainage Analysis for Copart 66 City of Adelanto San Bernardino County, California. Casc Engineering and Consulting. January 2025. (Appendix H)

Discussion of Impacts

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact: Wildland fire protection in California is the responsibility of the state, local government, or the federal government. The Project site is located within a

Local Responsibility Area (LRA), as identified on the latest Fire Hazard Severity Zone (FHSZ) map prepared by the California Department of Forestry and Fire Protection (CALFIRE). The Project site is not located in a State Responsibility Area (SRA) or classified as a Very High Fire Severity Zone (VHFSZ) within an LRA. The proposed Project includes two (2) commercial driveways off of Cactus Road and one (1) commercial driveway off of Holly Road and thus does not block access to the Project site or to surrounding properties, and does not impede the City's evacuation program. Furthermore, the Project will be subject to the review and approval of the San Bernardino County Fire Department. Based on the preceding, the potential for the Project to substantially impair an adopted emergency response or evacuation plan is less than significant.

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?

Less than Significant Impact: As discussed above in section 3.20(a), the Project site is not located within an SRA fire hazard zone. Though prevailing winds are a concern throughout the desert region, the Project site is relatively flat and does not contain considerable slopes that would exacerbate wildfire risk. Additionally, the Project site currently consists of sparse desert vegetation that would be removed with Project implementation. However, the proposed Project does not cause greater wildfire risks than other developments throughout the City of Adelanto. Therefore, a less than significant impact would occur.

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?

Less than Significant Impact: The Project does not require the installation or maintenance of associated infrastructure that would exacerbate fire risks or result in temporary or ongoing impacts to the environment. Although the Project includes infrastructure improvements such as paving along the Project frontage and the construction of a new curb, gutter, and sidewalk, these improvements would be concentrated to the immediate surroundings of the Project site and are unlikely to exacerbate fire risk, and a less than significant impact would occur.

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?

Less than Significant Impact: According to the County of San Bernardino HZ-4 Flood Hazards Policy Map, the surrounding area north of Holly Road is located within FEMA Zone X, 500-Year flood with a 0.2% annual chance flood hazard. The Project site is located south of Holly Road in a California Department of Water Resources (DWR) 100-Year Flood Awareness zone. The Drainage Study prepared for the Project by Casc Engineering and Consulting states that the proposed drainage improvements are designed to protect the proposed on-site improvements in the event of a 100-year storm event (Appendix H). Additionally, the Project site and the site's surroundings are relatively flat. Therefore, the

Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. Mandatory Findings of Significance				
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?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion of Impacts

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: Upon approval by the City, the proposed Project is consistent with the Manufacturing/Industrial land use and zoning designation of the site. The Project site is located within an area that contains vacant land and industrial/warehouse uses. The proposed Project would not substantially impact any scenic vistas, scenic resources, or the visual character of the area, and would not result in excessive light or glare. As discussed in Section IV. Biological Resources of this Initial Study, adverse impacts to biological resources, such as western Joshua tree, desert tortoise, and Mohave ground squirrel, are anticipated to be less than significant with the incorporation of Mitigation Measures **BIO-1** through **BIO-9**.

As described in Section V. Cultural Resources and XVIII. Tribal Cultural Resources of this Initial Study, adverse impacts to historical resources would be less than significant with the incorporation of Mitigation Measures **CUL-1, CUL-2, CUL-3, TCR-1, and TCR-2**. Additionally, the analysis provided in Section III. Air Quality and VIII. Greenhouse Gas Emissions concludes that impacts due to emissions of criteria pollutants would result in a less than significant impact to air quality and climate change.

Based on the preceding analysis of potential impacts in the responses to Sections I through XX, no evidence is presented that the proposed Project would degrade the quality of the environment. Impacts would be less than significant with mitigation incorporated.

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: Cumulative impacts can result from the interactions of environmental changes resulting from one proposed Project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public systems, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long-term, due to the permanent land use changes and operational characteristics involved with the proposed Project.

Implementation of the Project, in conjunction with other approved or pending projects in the region, would not result in cumulatively considerable impacts. Where appropriate, the environmental checklist questions above include discussion regarding cumulative impacts of the Project when developed in conjunction with related projects. As concluded throughout the analysis, the proposed Project would include both operation- and construction-related project components whose adherence to applicable regulations would ensure that the Project's incremental contribution would be less than cumulatively considerable. Further, the Project would not achieve short-term environmental goals to the disadvantage of long-term goals. Therefore, cumulatively considerable impacts would be considered less than significant.

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

Less than Significant Impact: Based on the analysis of the Project's impacts in the responses to items 3.1 through 3.20, there is no indication that this Project could result in substantial adverse effects on human beings. While there would be a variety of temporary adverse effects during construction, these would be less than significant. There are no long-term effects related to traffic, noise, hazardous materials, emissions of criteria pollutants and greenhouse gas emissions, increased demand for water use, wastewater disposal, and electricity use, or increased demand on emergency response services. Environmental effects would result in less than significant impacts. Based on the analysis in this Initial

Study, direct and indirect impacts to human beings would be less than significant.

CHAPTER FOUR – MITIGATION, MONITORING, AND REPORTING PROGRAM (MMRP)

Mitigation measures are included within each section of the initial study checklist and are provided below. Table 22-: Mitigation Monitoring and Reporting Program outlines the potential impacts and mitigation measures of the proposed Project and assigns responsibility for the oversight of each mitigation measure. This Table shall be included in all bid documents and included as a part of the Project development.

Table 22-1 Mitigation Monitoring and Reporting Program

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
Biological Resources				
IV. Biological Resources	**BIO-1 Incidental Take Permit from CDFW** The Applicant shall apply to CDFW for take authorization for western Joshua tree (WJT) through issuance of an Incidental Take Permit (ITP) prior to issuance of grading permits. The Applicant shall follow all mitigation requirements defined in the Project ITP. Application and supporting documentation shall be submitted to CDFW for review and approval for removal of WJTs on the Project site. An ITP establishes a performance standard requiring that the impacts be "minimized and fully mitigated" with measures that are roughly proportional in extent to the impact of the authorized taking of the species (Fish & G. Code § 2081(b); Cal. Code Regs., tit. 14, §§ 783.2-783.8). Therefore, additional mitigation measures, such as the purchase of credits from an approved conservation or mitigation bank, land acquisition, or entry into a conservation easement, will be determined in	Applicant and City of Adelanto	Prior to issuance of grading permit	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	consultation with CDFW to meet ITP requirements.			
IV. Biological Resources	**BIO-2 California Desert Native Plants Act Protection and Relocation Plan** If mitigation measures of the ITP (BIO-1) include preservation in place through avoidance or relocation, then a California *Desert Native Plant Protection and Relocation Plan* (CDNPA) for those trees proposed for relocation or preservation shall be composed which will provide detailed specifications for the proposed treatment, avoidance, or relocation of all western Joshua trees and those desert species included under the CDNPA. Other native desert species included for protection under CDNPA includes smoke trees (*Cotinus* sp.), species in the Agavacea family, mesquite (*Prosopis* sp.), and large creosote bushes (*Larrea* sp.). Further, the CDNPA will provide measures to meet the requirements of CEQA.	Applicant and City of Adelanto	Prior to issuance of grading permit	Less than Significant
IV. Biological Resources	**BIO-3 Pre-Construction Western Burrowing Owl Clearance Surveys** In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), two (2) pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. Once surveys are completed, the qualified biologist shall prepare a final report documenting surveys and findings. If no burrowing owls or	Applicant and City of Adelanto	Prior to start of construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	occupied burrows are detected, Project construction activities may begin. If an occupied burrow is found within the Project site during pre-construction clearance surveys, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to the County, which may consult with CDFW for review, prior to initiating Project construction activities.			
IV. Biological Resources	**BIO-4 Passive and Active Relocation of Western Burrowing Owls** If western burrowing owls are observed on the Project site during preconstruction surveys, CDFW shall be immediately notified to determine if avoidance of the nest is appropriate until the nest is vacated or to gain concurrence from CDFW on active or passive relocation actions. All passive or relocation activities shall be in concurrence with CDFW guidelines (Staff Report on Burrowing Owl Mitigation 2012). If burrowing owls are present and nesting on-site the following steps shall be necessary to reduce impacts to less than significant. These steps may be augmented by recommendations from CDFW: a. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that: (1) owls have not begun egg-laying and incubation; or (2) that juveniles from the occupied	Applicant and City of Adelanto	Prior to start of construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	burrows are foraging independently and are capable of independent survival. b. A qualified biologist shall exclude all owls from active burrows using one-way doors. Concurrently, all inactive burrows and other sources of secondary refuge for burrowing owls shall be collapsed and removed from the site. c. Following and 24 to 48-hour observation period, all vacated burrows shall be collapsed. d. A qualified biologist shall conduct a post-exclusion survey confirming the absence of burrowing owls on the Project site. Should newly occupied burrows be discovered on the Project site the exclusion activities shall be repeated.			
IV. Biological Resources	**BIO-5 Pre-Construction Survey for Mohave Ground Squirrel Survey** In accordance with the *California Department of Fish and Game Mohave Ground Squirrel Survey Guidelines* (July 2010) a qualified biologist with a Memorandum of Understanding (MOU) from CDFW shall perform a pre-construction one-day visual site assessment to determine the potential for Mohave ground squirrel to occur on the Project site and if trapping surveys are warranted. The pre-construction survey can be performed any time of year, however, the optimal time to perform a visual survey to determine activity and habitat quality is from 15 March through 15 April.	Applicant and City of Adelanto	Prior to start of construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	Prior to visiting the Project site, the qualified biologist will perform a literature search for all recent and historical records within the region of the Project site. Once on site, if the biologist observes conditions that are conducive to supporting Mohave ground squirrel, a trapping session may be necessary to determine presence/absence (See BIO-6 below). If the qualified biologist observes Mohave ground squirrel during the pre-construction visual survey, the Project site will be considered "occupied" and notification will be sent to CDFW. Mitigation for impacts to Mohave ground squirrel will then be negotiated with CDFW.			
IV. Biological Resources	**BIO-6 Mohave Ground Squirrel Presence/Absence Trapping Surveys** Mohave ground squirrel trapping shall be authorized by a MOU or Letter Permit issued by the Wildlife Branch of the Department, or by another permit as determined by the Department and shall be undertaken only by a qualified biologist. A qualified biologist is a biologist who has demonstrated pertinent field experience in capturing and handling ground squirrels or other small mammals in desert/arid communities and who has been permitted by the Department to work without supervision. Each biologist setting traps, opening traps containing captured animals, or handling captured animals must be named in the MOU or Letter Permit as an authorized	Applicant and City of Adelanto	Prior to start of construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	person, whether qualified or not to work without supervision. Visual surveys to determine Mohave ground squirrel activity and habitat quality shall be conducted during the period of 15 March through 15 April. All potential habitat on a Project site shall be visually surveyed during daylight hours by a biologist who can readily identify the Mohave ground squirrel and the white-tailed antelope squirrel (*Ammospermophilus leucurus*). One sampling grid consisting of 100 Sherman livetraps (or equivalent; the minimum length of any trap is 12 inches) shall be established for each 80 acres, or fraction thereof, of potential Mohave ground squirrel habitat on the Project site. The traps shall be arranged in a 10 x 10 grid, with 35-meter spacing between traps. Each sampling grid shall be trapped for a minimum of five consecutive days unless a Mohave ground squirrel is captured before the end of the five-day term on the grid or on another grid on the Project site. If no Mohave ground squirrel is captured on a sampling grid on the Project site in the first five-consecutive-day term, each sampling grid shall be sampled for a SECOND five-consecutive-day term. Trapping may be stopped before the end of the second term if a Mohave ground squirrel is captured on any sampling grid on the Project site. If no Mohave ground squirrel is captured during the			

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	second five-consecutive-day term, each sampling grid shall be sampled for a THIRD five-consecutive-day term. The FIRST trapping term shall begin and be completed in the period of 15 March through 30 April. If a SECOND term is required, it shall begin at least two weeks after the end of the first term, but shall begin no earlier than 01 May, and shall be completed by 31 May. If a THIRD term is required, it shall begin at least two weeks after the end of the second term, but shall begin no earlier than 15 June, and shall be completed by 15 July. All trapping shall be conducted during appropriate weather conditions, avoiding periods of high wind, precipitation, and low temperatures (less than 50 degrees Fahrenheit).			
IV. Biological Resources	**BIO-7 Desert Tortoise Presence/Absence Survey** A resource agency approved biologist will conduct desert tortoise presence/absence protocol level surveys by walking transects no greater than 15-feet in width over the entire Project site to gain 100% visual access. An assessment of a buffer zone is also required to complete the presence/absence survey. If desert tortoises are observed on the Project site or within the buffer area the resource agencies will be contacted immediately for further direction. A final Desert Tortoise Presence/Absence Report will be submitted to the Client, CDFW, and	Applicant and City of Adelanto	Prior to start of construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	USFWS. The report will discuss the survey methodology, transect width, duration, conditions, and results of the survey. GPS will be used to record potential or occupied burrows. Representative site photographs with a photo point location map will also be included in the final report.			
IV. Biological Resources	**BIO-8 Nesting Bird Preconstruction Surveys** If it is not feasible to avoid the nesting bird season (typically January through July for raptors and February through August for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or directly adjacent to the Project site. If active nests are located, the extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, the nesting bird survey shall occur no earlier than 30 days prior to the commencement of construction. In the event active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the	Applicant and City of Adelanto	Prior to start of construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).			
IV. Biological Resources	**BIO-9 Waste Discharge Requirements (WDRs) Application** As described on page 20 of the Jurisdictional Delineation Report prepared by CASC Engineering and Consulting, dated January 2024 (Appendix C), the Applicant shall submit the application form, *Application: Discharges of Dredged or Fill Material to Waters of the State*, and applicable fees to the Regional Water Quality Control Board (RWQCB) at least 45 days prior to the commencement of construction activities.	Applicant and City of Adelanto	Prior to issuance of grading permit	Less than Significant
IV. Biological Resources	**BIO-10 Streambed Alteration Agreement** As described on page 20 of the Jurisdictional Delineation Report prepared by CASC Engineering and Consulting, dated January 2024 (Appendix C), the Project Applicant shall submit a *Notification of Lake or Streambed Alteration* and associated permit filing fees to CDFW prior to issuance of grading permits. Effective September 1, 2020, all notifications for Standard Agreements must be submitted through CDFW's Environmental Permit Information Management System (EPIMS) Permitting Portal.	Applicant and City of Adelanto	Prior to issuance of grading permit	Less than Significant
Cultural Resources				
V. Cultural Resources	**CUL-1 Inadvertent Finds** In the event that cultural resources are discovered during project activities, all work in	Applicant and City of Adelanto	During ground disturbing activities	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	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 Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) 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.			
V. Cultural Resources	**CUL-2 Monitoring and Treatment Plan** If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.	Applicant and City of Adelanto	During ground disturbing activities	Less than Significant
V. Cultural Resources	**CUL-3 Findings of Human Remains or Funerary Objects** If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted	Applicant and City of Adelanto	During ground disturbing activities	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.			
Geology and Soils				
VII. Geology and Soils	**GEO-1 Grading and Construction** The Project shall incorporate the recommendations provided in the Preliminary Soils Investigation prepared by LOR Geotechnical Group, Inc., dated September 9, 2022 (Appendix F). The recommendations are located on pages 5-12 of the report and are presented under the following subheadings: General Site Grading, Preparation of Fill Areas, Engineered Compacted Fill, Short-term Excavations, Soil Expansiveness, Sulfate Protection, Exterior Flatwork, Preliminary Pavement Design and Construction monitoring.	Applicant and City of Adelanto	Prior to issuance of grading permits	Less than Significant
XVIII. Tribal Cultural Resources	**TCR-1 Pre-Contact Cultural Resources** The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in CUL-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 YSMN,	Applicant and City of Adelanto	During ground disturbing activities	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site.			
XVIII. Tribal Cultural Resources	**TCR-2 Archaeological/ Cultural Documents** 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 YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the project.	Applicant and City of Adelanto	During ground disturbing activities	Less than Significant

CHAPTER FIVE – REFERENCES AND PREPARERS

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Preliminary Soils and Infiltration/Percolation Feasibility Investigation APNs 3128-341-01, -02, -04, and -06 Adelanto, California. LOR Geotechnical Group, Inc. October 26, 2022. (Appendix F)

Raccoon Avenue Air Quality Impact Analysis, City of Adelanto. Urban Crossroads, Inc. May 8, 2023. (Appendix A)

Racoon Avenue Energy Analysis City of Adelanto. Urban Crossroads, Inc. May 8, 2023. (Appendix E)

Raccoon Avenue Greenhouse Gas Analysis City of Adelanto. Urban Crossroads, Inc. May 8, 2023. (Appendix G)

Racoon Avenue Noise Impact Analysis City of Adelanto. Urban Crossroads, Inc. April 24, 2023. (Appendix I)

Storm Water Management Program (SWMP) for the Mojave River Watershed. August 2003.

U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper.

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APPENDIX A
Racoon Avenue Air Quality Impact Analysis

Racoon Avenue

AIR QUALITY IMPACT ANALYSIS

CITY OF ADELANTO

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MAY 8, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg/m^3	Microgram per Cubic Meter
AADT	Annual Average Daily Traffic
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measures
BMPs	Best Management Practices
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
LST	Localized Significance Threshold
MDAQMD	Mojave Desert Air Quality Management District
MDAB	Mojave Desert Air Basin
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
Pb	Lead
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
PPM	Parts Per Million
Project	Racoon Avenue
ROG	Reactive Organic Gases
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIPs	State Implementation Plans

SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TIA	Traffic Impact Analysis
TOG	Total Organic Gases
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Racoon Avenue Air Quality Impact Analysis* are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.6	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.7	*Less Than Significant*	*n/a*
Sensitive Receptors	3.8	*Less Than Significant*	*n/a*
Odors	3.9	*Less Than Significant*	*n/a*
Cumulative Impacts	3.10	*Less Than Significant*	*n/a*

ES.2 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES

MDAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 403 (Fugitive Dust) (2); Rule 1113 (Architectural Coatings) (3). It should be noted that these Rules represent Best Available Control Measures (BACMs) and are not mitigation since they are regulatory requirements.

RULE 403

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (2).

- Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed

surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance

Take actions sufficient to prevent project-related Trackout onto paved surfaces.

RULE 1113

The following measures shall be incorporated into Project plans and specifications as implementation of MDAQMD Rule 1113 (3).

- Only "Low-Volatile Organic Compounds (VOC)" paints consistent with MDAQMD Rule 1113 shall be used.

ES.3 CONSTRUCTION-SOURCE MITIGATION MEASURES

Project construction emissions would not exceed applicable MDAQMD regional thresholds of significance. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

ES.4 OPERATIONAL-SOURCE MITIGATION MEASURES

Project operational emissions would not exceed applicable MDAQMD regional of local thresholds of significance. Therefore, Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc., for the proposed Racoon Avenue ("Project"). The purpose of this AQIA is to evaluate the potential air quality impacts associated with construction and operation of the proposed Project and identify measures, as necessary, to reduce emissions in comparison to thresholds established by the Mojave Desert Air Quality Management District (MDAQMD).

1.1 SITE LOCATION

The proposed Racoon Avenue Project is located on the corner of Holly Road and Racoon Avenue (APN 3128-34-01, 02, 04, and 06) in the City of Adelanto as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of an industrial parking lot utilized for overflow vehicle storage located on approximately 66 acres, as shown in Exhibit 1-B. The Project is anticipated to have an Opening Year of 2024.

EXHIBIT 1-A: LOCATION MAP

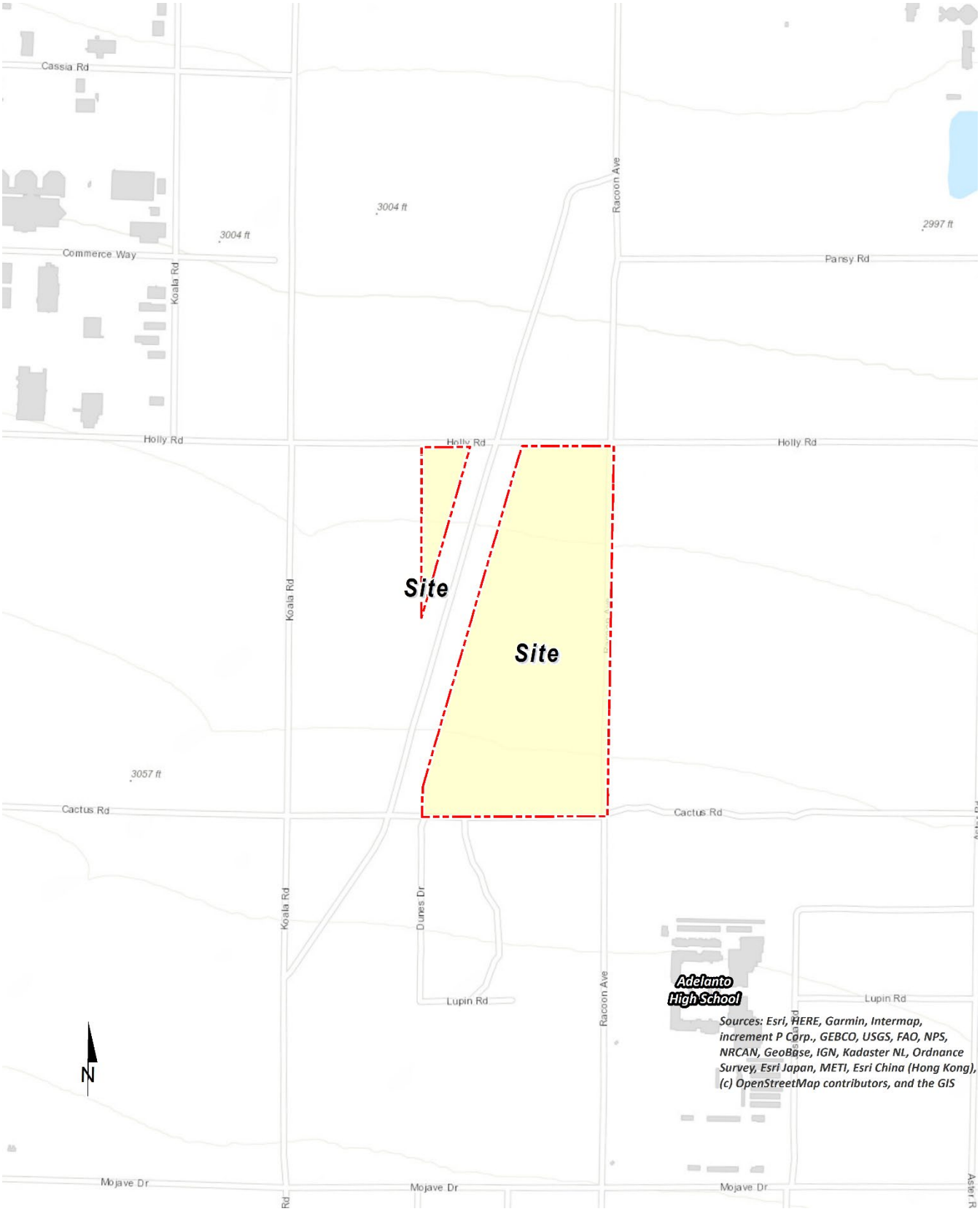
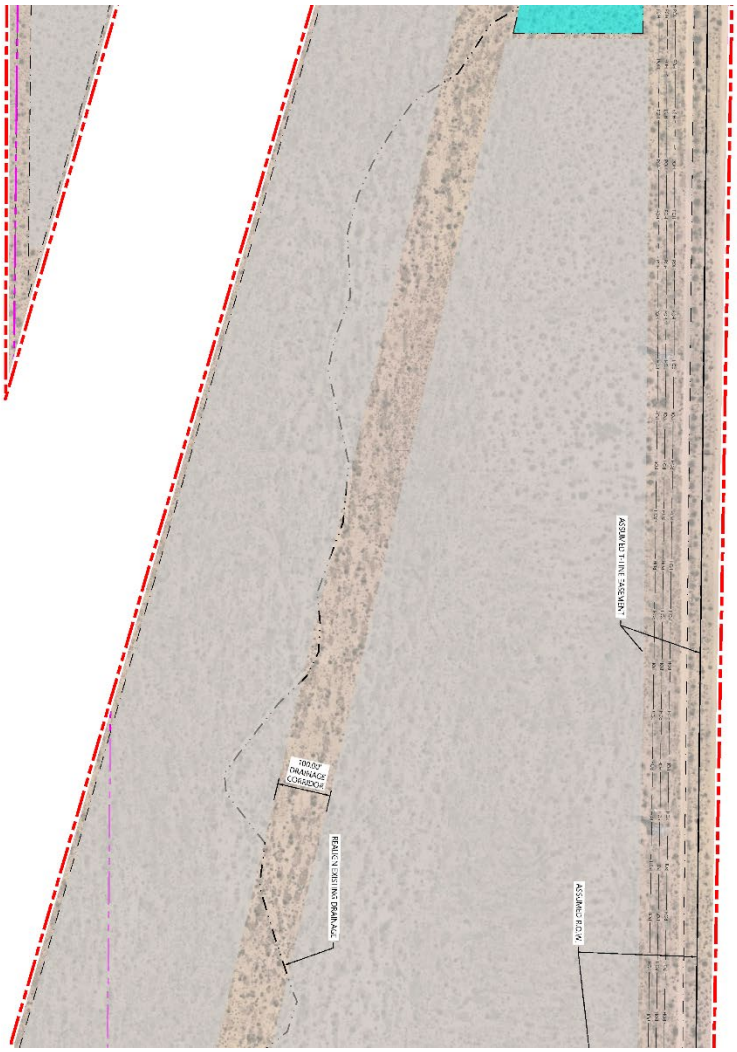


EXHIBIT 1-B: SITE PLAN



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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 MOJAVE DESERT AIR BASIN

The Project site is located in the portion of the County of San Bernardino, California, that is part of the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of the MDAQMD. The air quality assessment for the proposed Project includes estimating emissions associated with short-term construction and long-term operation of the proposed Project. A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the MDAQMD, have created guidelines and requirements to conduct air quality analyses. The MDAQMD's current guidelines, included in its *California Environmental Quality Act and Federal Conformity Guidelines* (August 2011), were adhered to in the assessment of air quality impacts for the proposed Project.

2.2 REGIONAL CLIMATE

Air quality in the Project area is not only affected by various emissions sources (mobile, industry, etc.) but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall.

The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 ft above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and central California valley regions by mountains (highest elevation is approximately 10,000 ft), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriels by the Cajon Pass (4,200 ft). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 ft) between the San Bernardino and San Jacinto Mountains.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified

as dry-very hot desert, to indicate that at least three months have maximum average temperatures over 100.4° F.

Snow is common above 5,000 ft in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 ft, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During late summer, moist high-pressure systems from the Pacific collide with rising heated air from desert areas, resulting in brief, high-intensity thunderstorms that can cause high winds and localized flash flooding.

2.3 EXISTING AIR QUALITY

Existing air quality is measured at established MDAQMD air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-1 (4).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2, NO_2, PM_{10}, $PM_{2.5}$, and visible reducing particles are not to be exceeded at any time in any consecutive three-year period; all other values are not to be equaled or exceeded. The air quality in a region is considered to be in attainment by federal standards if the measured ambient air pollutant levels for O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean are not exceeded more than once per year. The O_3 standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of says per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

2.4 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, particulate matter (PM_{10} and $PM_{2.5}$), NO_2, and SO_2 which are known as criteria pollutants. The MDAQMD monitors levels of various criteria pollutants at 6 permanent monitoring stations throughout the air district (5). On December 28, 2021, CARB posted the 2021 amendments to the state and national area designations. See Table 2-3 for attainment designations for the MDAB and the Southeast Desert Air Basin (SDAB) (6). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the MDAB and SDAB.

TABLE 2-2: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE MDAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassifiable/Attainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the MDAB and SDAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.5 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for O_3, NO_2, PM_{10} and $PM_{2.5}$ was obtained from the MDAQMD Victorville-Park Avenue, located approximately 7.00 miles southeast of the project site in Victorville. It should be noted that the data for CO was not available at MDAQMD Victorville-Park Avenue nor the nearest alternative monitoring station, MDAQMD Hesperia-Olive Street, located approximately 12.12 miles southeast of the project site in Hesperia.

Data for CO was obtained from the MDAQMD Hesperia-Olive Street monitoring station, located approximately 12.12 miles southeast of the project site in Hesperia. It should be noted that the Hesperia-Olive Street monitoring station were utilized in lieu of the Victorville-Park Avenue monitoring station only where data was not available from the nearest monitoring site.

The most recent three (3) years of data available is shown on Table 2-3 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, NO_2, PM_{10}, and $PM_{2.5}$ was obtained using the CARB iADAM: Air Quality and Data Statistics and the Air Quality and Meteorological Information System (AQMIS) (7) (8). Data for SO_2 has been omitted as attainment

is regularly met and few monitoring stations measure SO_2 concentrations. It should be noted that the table below is provided for informational purposes.

TABLE 2-3: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2019-2021

Pollutant	Standard	Year		
		2019	2020	2021
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.104	0.112	0.112
Maximum Federal 8-Hour Concentration (ppm)		0.081	0.094	0.098
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	3	4	8
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	34	38	35
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	--	--	--
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	56.0	59.4	56.4
Annual Federal Standard Design Value		11	13	13
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	170.0	261.4	591.6
Annual Federal Arithmetic Mean ($\mu g/m^3$)		27.2	34.0	33.9
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	2	2	1
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	--	--	--
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	17.8	48.4	87.1
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	7.0	9.7	10.2
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	0	4	1

Source: California Air Resource Board iADAM: Air Quality Data Statistics and AQMIS
ppm = Parts Per Million
$\mu g/m^3$ – microgram per cubic meter
-- = data not available

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (9):

- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

- Sulfur Dioxide (SO_2): Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X).
- Nitrogen Oxides (Oxides of Nitrogen, or NO_x): Nitrogen oxides (NO_x) consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors.
- Ozone (O_3): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- PM_{10} (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} also causes visibility reduction and is a criteria air pollutant.
- $PM_{2.5}$ (Particulate Matter less than 2.5 microns): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.
- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The MDAQMD uses the terms VOC and ROG (see below) interchangeably.
- Reactive Organic Gases (ROG): Similar to VOC, Reactive Organic Gases (ROG) are also precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the

presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The MDAQMD uses the terms ROG and VOC (see previous) interchangeably.

- Lead (Pb): Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the MDAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

2.6 REGULATORY BACKGROUND

2.6.1 FEDERAL REGULATIONS

The U.S. EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_x, SO_2, PM_{10}, and lead (10). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (11). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and lead. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 3-1 (previously presented) provides the NAAQS within the basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NO_x). NOx is a collective term that includes all forms of nitrogen oxides (NO, NO_2, NO_3) which are emitted as byproducts of the combustion process.

2.6.2 CALIFORNIA REGULATIONS

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for

regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the MDAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (12) (10).

Local air quality management districts, such as the MDAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Under the California CAA non-attainment areas are required to prepare Air Quality Plans (AQP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NO_x, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2022 version of Title 24 was adopted by the CEC and will be effective on January 1, 2023. The 2022 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings.

The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (13). The Project would be required to comply

with the applicable standards in place at the time building permit document submittals are made. These require, among other items (14):

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).

- Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
- Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.6.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the MDAB. In regards to the NAAQS, the Project region within the MDAB is in nonattainment for ozone (8-hour) and PM_{10}. For the CAAQS, the Project region within the MDAB is in nonattainment for ozone (1-hour and 8-hour), PM_{10}, and $PM_{2.5}$. In response, the MDAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards (15). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.7.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the MDAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (16):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

The MDAQMD has developed regional significance thresholds for regulated pollutants, shown below in Table 3-1. The MDAQMD's *CEQA and Federal Conformity Guidelines* indicate that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact (17).

TABLE 3-1: MAXIMUM REGIONAL DAILY EMISSIONS THRESHOLDS

Pollutant	Daily Threshold (pounds)
CO	548 lbs/day
NO_X	137 lbs/day
VOC	137 lbs/day
SO_X	137 lbs/day
PM_{10}	82 lbs/day
$PM_{2.5}$	65 lbs/day

Note: lbs/day – pounds per day

3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ESTIMATE AQ EMISSIONS

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from MMs (18). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of CO, VOCs, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

SITE PREPARATION AND GRADING ACTIVITIES

Dust, in the form of PM_{10} and $PM_{2.5}$, is typically a major concern during site preparation and grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on information provided, the site will require approximately 36,600 cubic yards of soil export.

BUILDING CONSTRUCTION, PAVING, AND ARCHITECTURAL COATING ACTIVITIES

Building construction and paving emissions are primarily associated with exhaust emissions from on-site equipment and vehicular trips to the site by construction workers and vendor trips. Architectural coating emissions include worker trips as well, but the primary pollutant emission of concern during this phase is ROG/VOC. CalEEMod default emission rates include the effects of Rule 1113 to limit ROG/VOC emissions. To present a reasonable worst-case scenario, the building construction, paving, and architectural coating activities are modeled as overlapping phases.

CONSTRUCTION WORKER VEHICLE TRIPS

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information from CalEEMod defaults.

3.4.1 CONSTRUCTION DURATION

Construction is expected to commence in January 2024 and will last through August 2024. Construction duration by phase is shown on Table 3-2. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[1] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines.

TABLE 3-2: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	1/1/2024	1/8/2024	6
Grading	1/9/2024	1/29/2024	15
Building Construction	1/30/2024	8/30/2024	154
Paving	8/16/2024	8/30/2024	11
Architectural Coating	8/16/2024	8/30/2024	11

Source: Construction schedule based on CalEEMod default parameters.

3.4.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity was based on CalEEMod model defaults adjusted to account for a 2024 Opening Year. The associated construction equipment was generally based on CalEEMod defaults with modifications to assign 8-hour working days and account for ground disturbance during site preparation and grading. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this analysis. A detailed summary of construction equipment assumptions by phase is provided on Table 3-3.

[1] As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version, Section 4.3"OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment[1]	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: Construction equipment based on CalEEMod default parameters.

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction would not exceed thresholds established by the MDAQMD for emissions of any criteria pollutant. As such, the Project will have a less than significant impact during on-going construction activity and no mitigation is required.

TABLE 3-4: EMISSIONS SUMMARY OF CONSTRUCTION (WITHOUT MITIGATION)

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2024	90.84	21.27	27.14	0.04	1.17	0.94
Winter						
2024	4.04	59.70	36.77	0.20	10.34	4.21
Maximum Daily Winter Emissions	**90.84**	**59.70**	**36.77**	**0.20**	**10.34**	**4.21**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod, Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using CalEEMod standard assumptions for the Project and the allowed land use.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on CalEEMod standard assumptions for the Project and the allowed land use.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the

landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod for the Project and the allowed land use.

3.5.2 Energy Source Emissions

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. It should be noted that there are no emissions associated with energy sources, as natural gas is not utilized within the Project's proposed land use.

3.5.3 Mobile Source Emissions

Project-related operational air quality impacts derive primarily from the 30 vehicle trips generated by the Project, including employee trips to and from the site associated with the proposed uses. Trip characteristics available from the *Holly Road and Racoon Ave Trip Generation Analysis* (TJW Engineering, Inc.) were utilized in this analysis (19).

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod standard assumptions.

3.5.4 Operational Emissions Summary

Operational-source emissions are summarized on Table 3-5. Detailed operational model outputs are presented in Appendix 3.1. Project operational-source emissions would not exceed the applicable MDAQMD thresholds for any criteria pollutant. Thus, a less than significant impact would occur for Project operational-source emissions and no mitigation is required.

TABLE 3-5: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	0.22	0.34	3.21	0.01	0.24	0.05
Area Source	0.45	0.00	0.00	0.00	0.00	0.00
Maximum Daily Summer Emissions	**0.67**	**0.34**	**3.21**	**0.01**	**0.24**	**0.05**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Winter						
Mobile Source	0.20	0.37	2.36	0.01	0.24	0.05
Area Source	0.45	0.00	0.00	0.00	0.00	0.00
Maximum Daily Winter Emissions	**0.64**	**0.37**	**2.36**	**0.01**	**0.24**	**0.05**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod, Appendix 3.1

3.6 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the air basin was designated nonattainment under the California AAQS and National AAQS for CO (20).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the air basin is now designated as attainment, as previously noted in Table 2-2. Also, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented previously at Table 2-3.

To establish a more accurate record of baseline CO concentrations affecting the basin, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods[2]. This "hot spot" analysis did not predict any exceedance e of the 1-hour (20.0 ppm) or 8-hour (9.0 ppm) CO standards, as shown on Table 3-6.

[2] The CO "hot spot" analysis conducted in 2003 is the most current study used for CO "hot spot" analysis in the SCAB.

TABLE 3-6: CO MODEL RESULTS

Intersection Location	Carbon Monoxide Concentrations (parts per million)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire-Veteran	4.6	3.5	3.7
Sunset-Highland	4	4.5	3.5
La Cienega-Century	3.7	3.1	5.2
Long Beach-Imperial	3	3.1	8.4

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

It should be noted that MDAQMD has not established its own guidelines for CO hotspots analysis. Since the MDAQMD guidelines are based on SCAQMD methodology, it is appropriate to apply the SCAQMD criteria when analyzing CO hotspots within the MDAQMD. As identified within SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the basin were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, of the 8.4 ppm CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (i.e., the highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (20). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 0.112 ppm and 0.098 ppm, respectively (data from Victorville-Park Avenue station for 2021). Therefore, even if the traffic volumes for the proposed Project were ten times the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, due to the on-going improvements in ambient air quality and vehicular emissions controls, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. As noted above, only 0.7 ppm were attributable to the traffic volumes and congestion at one of the busiest intersections in the SCAB. Therefore if these traffic volumes were multiplied by ten times, it could be expected that the CO attributable to traffic would increase tenfold as well, resulting in 7 ppm – even if this were added to either the 1-hour or 8-hour CO concentrations within the Project study area, this would result in 7.112 ppm and 7.098 ppm for the 1-hr and 8-hr timeframes, respectively. Neither of which would exceed the applicable 1-hr standard of 20 ppm or the 8-hr standard of 9 ppm.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (21).

Traffic volumes generating the CO concentrations for the "hot spot" analysis, shown on Table 3-7. The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which had AM/PM traffic volumes of 8,062 vehicles per hour and 7,719 vehicles per hour respectively (20).

The proposed Project considered herein would generate 30 trips and would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

TABLE 3-7: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vehicles per hour)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire-Veteran	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset-Highland	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega-Century	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach-Imperial	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

3.7 AIR QUALITY MANAGEMENT PLANNING

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with: 1) local land use plans and/or population projections, 2) all MDAQMD Rules and Regulations; and 3) demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards.

The City of Adelanto General Plan designates the Project site for Manufacturing/Industrial "MI" uses. The primary purpose of areas designated "MI" is to minimize exposure to its surroundings from more employment-intensive developments such as correctional facilities, controlled hazard uses, renewable energy facilities, manufacturing, distribution and warehousing, and automotive related businesses. The Manufacturing/Industrial designation allows for a maximum FAR of 0.60 (22).

As the proposed Project will consist of an industrial use parking lot for wrecked car storage located on approximately 66 acres, the Project's proposed uses are consistent with the site's land use designations.

AQMP Consistency Conclusion

The Project would not result in or cause NAAQS or CAAQS violations. The Project's proposed land use designation for the subject site is consistent with the land use designation discussed in the General Plan. Furthermore, the Project would not exceed the applicable regional thresholds and would therefore be considered to have a less than significant impact. The Project is therefore considered to be consistent with the AQMP.

3.8 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors. The nearest sensitive receptor is a school, Adelanto High School, located approximately 789 feet southeast of the Project site.

As per the MDAQMD Guidelines, the following project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors (17):

- 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 consists of a parking lot utilized for overflow vehicle storage and does not include the above uses. As such, no analysis for sensitive receptors is required. Additionally. results of the regional analysis indicate that the Project will not exceed the MDAQMD significance thresholds during construction or operations. Therefore, sensitive receptors would not be subject to a significant air quality impact during Project construction and operational activities.

The proposed Project would not result in a CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.6. Thus, a less than significant impact to sensitive receptors during operational activity is expected.

3.9 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants

- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with MDAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors, and emissions that may lead to odors, associated with the proposed Project construction and operations would be less than significant and no mitigation is required.

3.10 CUMULATIVE IMPACTS

Related projects could contribute to an existing or projected air quality exceedance because the Basin is currently nonattainment for O_3, PM_{10}, and $PM_{2.5}$.

The MDAQMD relies on the SCAQMD guidance for determining cumulative impacts. The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects.

The SCAQMD published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (23). In this report the AQMD clearly states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Conversely, individual project-related construction and operational emissions that exceed MDAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project will not exceed the applicable MDAQMD regional threshold for construction and operational-source emissions. As such, the Project will not result in a cumulatively significant impact for construction or operational activity.

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4 CONCLUSION

CONSTRUCTION-SOURCE EMISSIONS

REGIONAL IMPACTS

For regional emissions, the Project will not exceed the numerical thresholds of significance established by the Mojave Desert Air Quality Management District (MDAQMD). Thus, a less than significant impact would occur for Project-related construction-source emissions and no mitigation measures are required.

Odors

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

OPERATIONAL-SOURCE EMISSIONS

REGIONAL IMPACTS

For regional emissions, the Project would not exceed the numerical thresholds of significance established by the MDAQMD. Thus, a less than significant impact would occur for Project-related operational-source emissions and no mitigation measures are required.

The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.6, thus a less than significant impact to sensitive receptors during operational activity is expected.

ODORS

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous refuse. Moreover, MDAQMD Rule 402 acts to prevent occurrences of odor nuisances (24). Consistent with City of Adelanto requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Potential operational-source odor impacts are therefore considered less-than-significant.

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6 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Racoon Avenue Project. The information contained in this health risk assessment is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June, 2013
Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
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Air Dispersion Modeling – Lakes Environmental • June, 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

Appendix C
Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

Appendix C
Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. § 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Ambient Air Quality Standards

(Updated 5/4/16)

Pollutant	Averaging Time	California Standards [1]		National Standards [1]		
		Concentration [3]	Method [4]	Primary [5,6]	Secondary [5,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	**24 Hour**	**50 µg/m³**	**Gravimetric or Beta Attenuation**	**150 µg/m³**	**Same as Primary Standard**	**Inertial Separation and Gravimetric Analysis**
	Annual Arithmetic Mean	**20 µg/m³**		—		
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	**1 Hour**	**20 ppm (23 mg/m³)**	**Non-Dispersive Infrared Photometry (NDIR)**	**35 ppm (40 mg/m³)**	—	**Non-Dispersive Infrared Photometry (NDIR)**
	8 Hour	**9.0 ppm (10 mg/m³)**		**9 ppm (10 mg/m³)**	—	
	8 Hour (Lake Tahoe)	**6 ppm (7 mg/m³)**		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	**1 Hour**	**0.25 ppm (655 µg/m³)**	**Ultraviolet Fluorescence**	**75 ppb (196 µg/m³)**	—	**Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)**
	3 Hour	—		—	**0.5 ppm (1300 µg/m³)**	
	24 Hour	**0.04 ppm (105 µg/m³)**		**0.14 ppm (for certain areas)[11]**	—	
	Annual Arithmetic Mean	—		**0.030 ppm (for certain areas)[11]**	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	**8 Hour**	**See footnote 14**	**Beta Attenuation and Transmittance through Filter Tape**	**No National Standards**		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	**1 Hour**	**0.03 ppm (42 µg/m³)**	**Ultraviolet Fluorescence**			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency (U.S. EPA) for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$)as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

Figure 1



Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 1
California Ambient Air Quality Standards Area Designations for Ozone[1]

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County	N			
Mono County	N			
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN				A
MOJAVE DESERT AIR BASIN	N			
MOUNTAIN COUNTIES AIR BASIN				
Amador County		NA-T		
Calaveras County	N			
El Dorado County (portion)	N			
Mariposa County	N			
Nevada County	N			
Placer County (portion)	N			
Plumas County			U	
Sierra County			U	
Tuolumne County	N			
NORTH CENTRAL COAST AIR BASIN				A
NORTH COAST AIR BASIN				A

	N	NA-T	U	A
NORTHEAST PLATEAU AIR BASIN				A
SACRAMENTO VALLEY AIR BASIN				
Colusa and Glenn Counties				A
Shasta County		NA-T		
Sutter/Yuba Counties				
Sutter Buttes	N			
Remainder of Sutter County	N			
Yuba County	N			
Yolo/Solano Counties		NA-T		
Remainder of Air Basin	N			
SALTON SEA AIR BASIN	N			
SAN DIEGO AIR BASIN	N			
SAN FRANCISCO BAY AREA AIR BASIN	N			
SAN JOAQUIN VALLEY AIR BASIN	N			
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County	N			
Santa Barbara County	N			
Ventura County	N			
SOUTH COAST AIR BASIN	N			

[1] AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

Figure 2



Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 2
California Ambient Air Quality Standards Area Designation for Suspended Particulate Matter (PM_{10})

	N	U	A
GREAT BASIN VALLEYS AIR BASIN	N		
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN	N		
MOJAVE DESERT AIR BASIN	N		
MOUNTAIN COUNTIES AIR BASIN			
Amador County		U	
Calaveras County	N		
El Dorado County (portion)	N		
Mariposa County			
- Yosemite National Park	N		
- Remainder of County		U	
Nevada County	N		
Placer County (portion)	N		
Plumas County	N		
Sierra County	N		
Tuolumne County		U	

	N	U	A
NORTH CENTRAL COAST AIR BASIN	N		
NORTH COAST AIR BASIN			
Del Norte, Mendocino, Sonoma (portion) and Trinity Counties			A
Remainder of Air Basin	N		
NORTHEAST PLATEAU AIR BASIN			
Siskiyou County			A
Remainder of Air Basin		U	
SACRAMENTO VALLEY AIR BASIN			
Shasta County			A
Remainder of Air Basin	N		
SALTON SEA AIR BASIN	N		
SAN DIEGO AIR BASIN	N		
SAN FRANCISCO BAY AREA AIR BASIN	N		
SAN JOAQUIN VALLEY AIR BASIN	N		
SOUTH CENTRAL COAST AIR BASIN	N		
SOUTH COAST AIR BASIN	N		

Figure 3



Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 3
California Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
Plumas County			A
- Portola Valley[1]	N		
Remainder of Air Basin		U	
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A
SACRAMENTO VALLEY AIR BASIN			
Butte County	N		
Colusa County			A
Glenn County			A
Placer County (portion)			A
Sacramento County			A
Shasta County			A
Sutter and Yuba Counties			A
Remainder of Air Basin		U	

	N	U	A
SALTON SEA AIR BASIN			
Imperial County			
- City of Calexico[2]	N		
Remainder of Air Basin			A
SAN DIEGO AIR BASIN	N		
SAN FRANCISCO BAY AREA AIR BASIN	N		
SAN JOAQUIN VALLEY AIR BASIN	N		
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN	N		

[1] California Code of Regulations, title 17, section 60200(c)

[2] California Code of Regulations, title 17, section 60200(a)

Figure 4


2021
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
SAN JOAQUIN VALLEY
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 4
California Ambient Air Quality Standards Area Designation for Carbon Monoxide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County				A
Mono County				A
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN				A
MOJAVE DESERT AIR BASIN				
Kern County (portion)			U	
Los Angeles County (portion)				A
Riverside County (portion)			U	
San Bernardino County (portion)				A
MOUNTAIN COUNTIES AIR BASIN				
Amador County			U	
Calaveras County			U	
El Dorado County (portion)			U	
Mariposa County			U	
Nevada County			U	
Placer County (portion)			U	
Plumas County				A
Sierra County			U	
Tuolumne County				A
NORTH CENTRAL COAST AIR BASIN				
Monterey County				A
San Benito County			U	
Santa Cruz County			U	
NORTH COAST AIR BASIN				
Del Norte County			U	
Humboldt County				A
Mendocino County				A
Sonoma County (portion)			U	
Trinity County			U	
NORTHEAST PLATEAU AIR BASIN			U	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN				
Butte County				A
Colusa County			U	
Glenn County			U	
Placer County (portion)				A
Sacramento County				A
Shasta County			U	
Solano County (portion)				A
Sutter County				A
Tehama County			U	
Yolo County				A
Yuba County			U	
SALTON SEA AIR BASIN				A
SAN DIEGO AIR BASIN				A
SAN FRANCISCO BAY AREA AIR BASIN				A
SAN JOAQUIN VALLEY AIR BASIN				
Fresno County				A
Kern County (portion)				A
Kings County			U	
Madera County			U	
Merced County			U	
San Joaquin County				A
Stanislaus County				A
Tulare County				A
SOUTH CENTRAL COAST AIR BASIN				A
SOUTH COAST AIR BASIN				A

* The area designated for carbon monoxide is a county or portion of a county

Figure 5



Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 5
California Ambient Air Quality Standards Area Designations for Nitrogen Dioxide

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A
SACRAMENTO VALLEY AIR BASIN			A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			
CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties			A
Remainder of Air Basin			A

Figure 6


2021
Area Designations for State
Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 6
California Ambient Air Quality Standards Area Designation for Sulfur Dioxide*

	N	A
GREAT BASIN VALLEYS AIR BASIN		A
LAKE COUNTY AIR BASIN		A
LAKE TAHOE AIR BASIN		A
MOJAVE DESERT AIR BASIN		A
MOUNTAIN COUNTIES AIR BASIN		A
NORTH CENTRAL COAST AIR BASIN		A
NORTH COAST AIR BASIN		A
NORTHEAST PLATEAU AIR BASIN		A

	N	A
SACRAMENTO VALLEY AIR BASIN		A
SALTON SEA AIR BASIN		A
SAN DIEGO AIR BASIN		A
SAN FRANCISCO BAY AREA AIR BASIN		A
SAN JOAQUIN VALLEY AIR BASIN		A
SOUTH CENTRAL COAST AIR BASIN		A
SOUTH COAST AIR BASIN		A

* The area designated for sulfur dioxide is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 7


2021
Area Designations for State
Ambient Air Quality Standards
SULFATES
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
SAN JOAQUIN VALLEY
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 7
California Ambient Air Quality Standards Area Designation for Sulfates

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A

	N	U	A
SACRAMENTO VALLEY AIR BASIN			A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			A

Figure 8


2021
Area Designations for State
Ambient Air Quality Standards
LEAD
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
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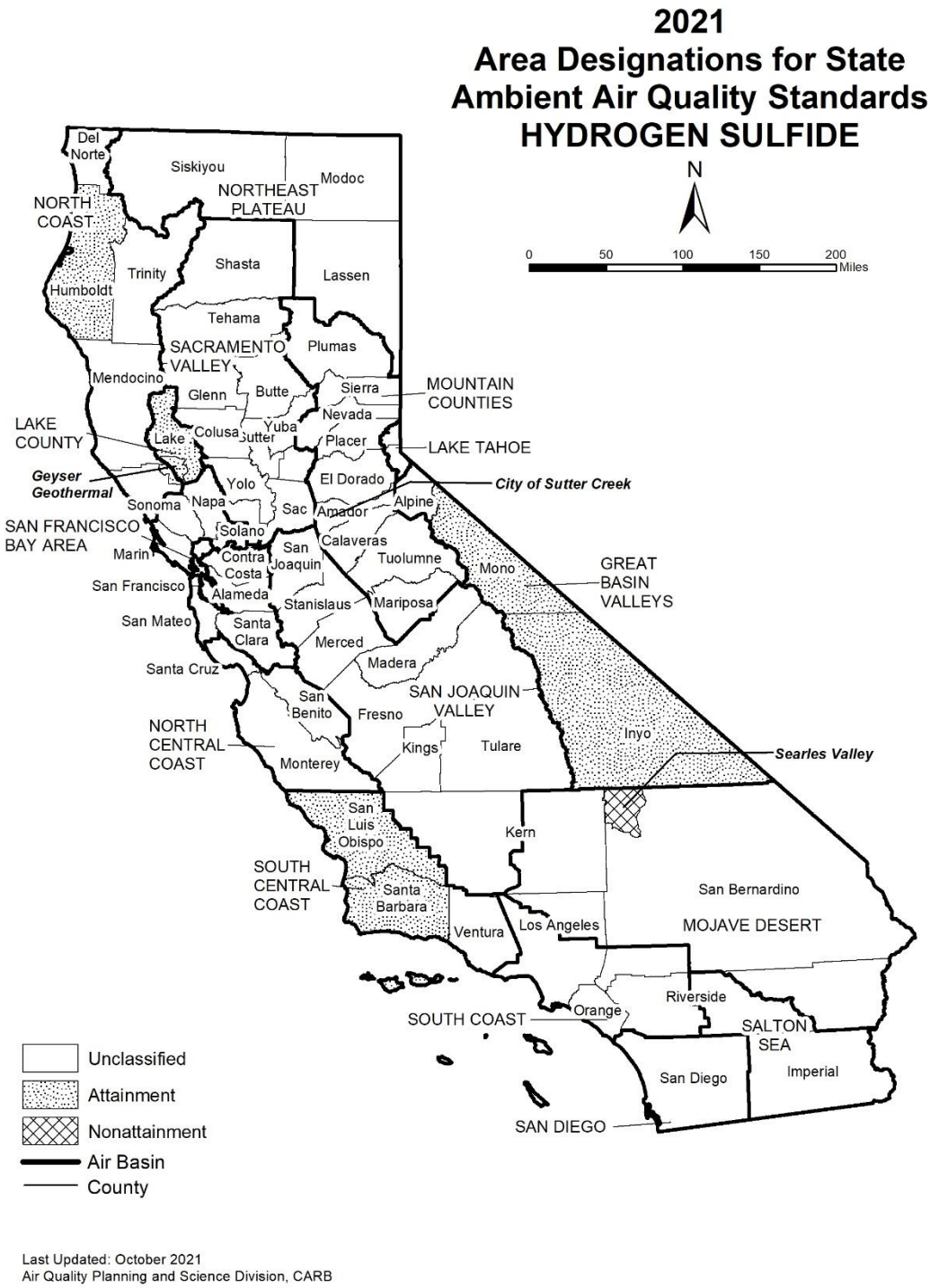
Table 8
California Ambient Air Quality Standards Area Designations for Lead (particulate)*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A
SACRAMENTO VALLEY AIR BASIN			A

	N	U	A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			A

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 9



Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 9
California Ambient Air Quality Standards Area Designation for Hydrogen Sulfide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County				A
Mono County				A
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN			U	
MOJAVE DESERT AIR BASIN				
Kern County (portion)			U	
Los Angeles County (portion)			U	
Riverside County (portion)			U	
San Bernardino County (portion)				
- Searles Valley Planning Area[1]	N			
- Remainder of County			U	
MOUNTAIN COUNTIES AIR BASIN				
Amador County				
- City of Sutter Creek	N			
- Remainder of County			U	
Calaveras County			U	
El Dorado County (portion)			U	
Mariposa County			U	
Nevada County			U	
Placer County (portion)			U	
Plumas County			U	
Sierra County			U	
Tuolumne County			U	

	N	NA-T	U	A
NORTH CENTRAL COAST AIR BASIN			U	
NORTH COAST AIR BASIN				
Del Norte County			U	
Humboldt County				A
Mendocino County			U	
Sonoma County (portion)				
- Geyser Geothermal Area[2]				A
- Remainder of County			U	
Trinity County			U	
NORTHEAST PLATEAU AIR BASIN			U	
SACRAMENTO VALLEY AIR BASIN			U	
SALTON SEA AIR BASIN			U	
SAN DIEGO AIR BASIN			U	
SAN FRANCISCO BAY AREA AIR BASIN			U	
SAN JOAQUIN VALLEY AIR BASIN			U	
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County				A
Santa Barbara County				A
Ventura County			U	
SOUTH COAST AIR BASIN			U	

* The area designated for hydrogen sulfide is a county or portion of a county

[1] 52 Federal Register 29384 (August 7, 1987)

[2] California Code of Regulations, title 17, section 60200(d)

Figure 10

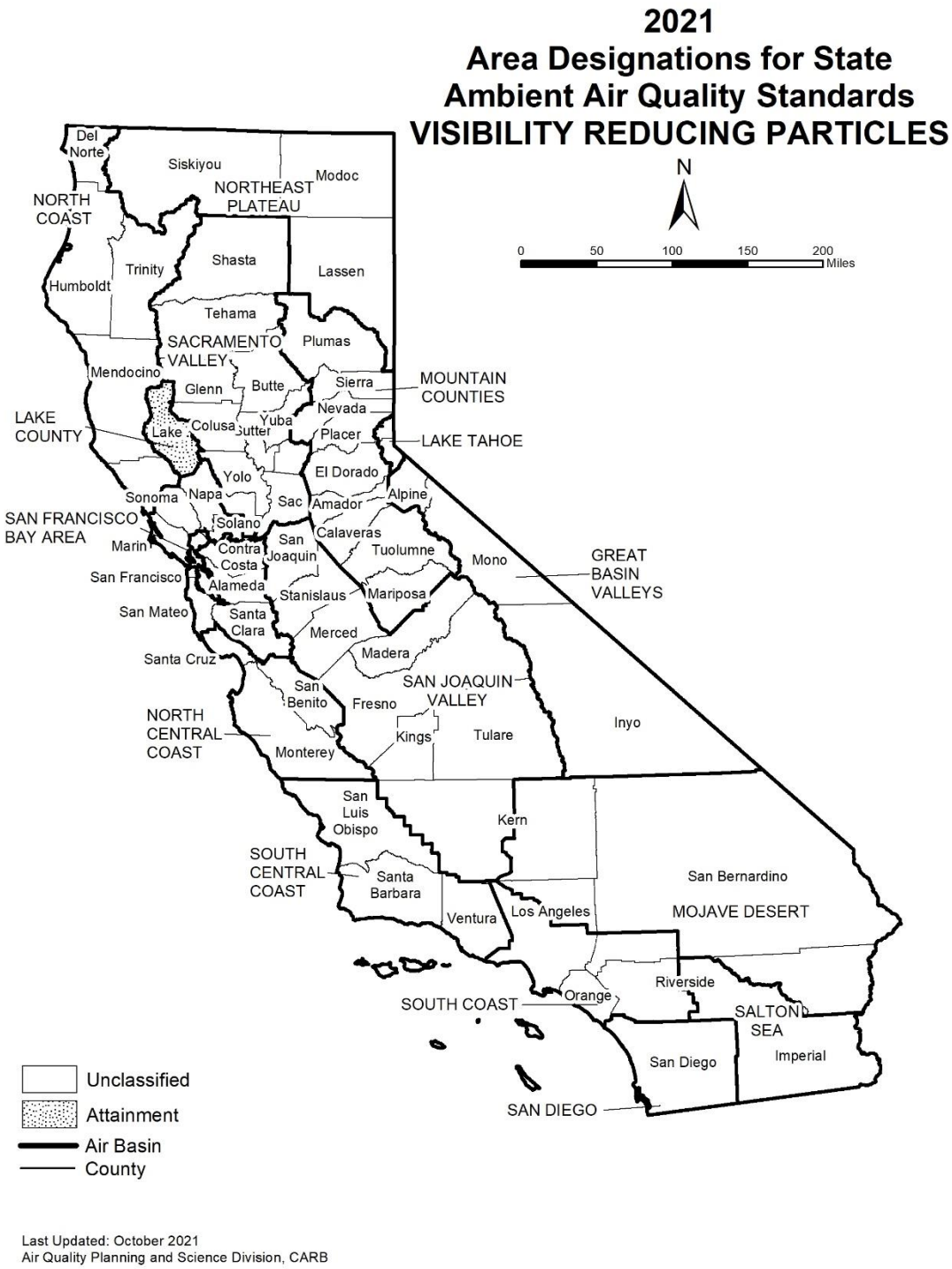

2021
Area Designations for State
Ambient Air Quality Standards
VISIBILITY REDUCING PARTICLES
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 10
California Ambient Air Quality Standards Area Designation for Visibility Reducing Particles

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN			U	
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN			U	
MOJAVE DESERT AIR BASIN			U	
MOUNTAIN COUNTIES AIR BASIN			U	
NORTH CENTRAL COAST AIR BASIN			U	
NORTH COAST AIR BASIN			U	
NORTHEAST PLATEAU AIR BASIN			U	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN			U	
SALTON SEA AIR BASIN			U	
SAN DIEGO AIR BASIN			U	
SAN FRANCISCO BAY AREA AIR BASIN			U	
SAN JOAQUIN VALLEY AIR BASIN			U	
SOUTH CENTRAL COAST AIR BASIN			U	
SOUTH COAST AIR BASIN			U	

Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. Environmental Protection Agency (U.S. EPA) website:

https://www.epa.gov/green-book

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

https://www.epa.gov/criteria-air-pollutants

Designation Categories

Suspended Particulate Matter (PM_{10}). The U.S. EPA uses three categories to designate areas with respect to PM_{10}:

- Attainment (A)
- Nonattainment (N)
- Unclassifiable (U)

Ozone, Fine Suspended Particulate Matter ($PM_{2.5}$), Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment (N)
- Unclassifiable/Attainment (U/A)

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Area designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary $PM_{2.5}$ standard of 12.0 µg/m^3. Area designations were finalized in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 µg/m^3 as well as the 24-hour standard of 35 µg/m^3, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO_2 standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO_2 standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO_2). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment (N),
- Unclassifiable (U), and
- Unclassifiable/Attainment (U/A).

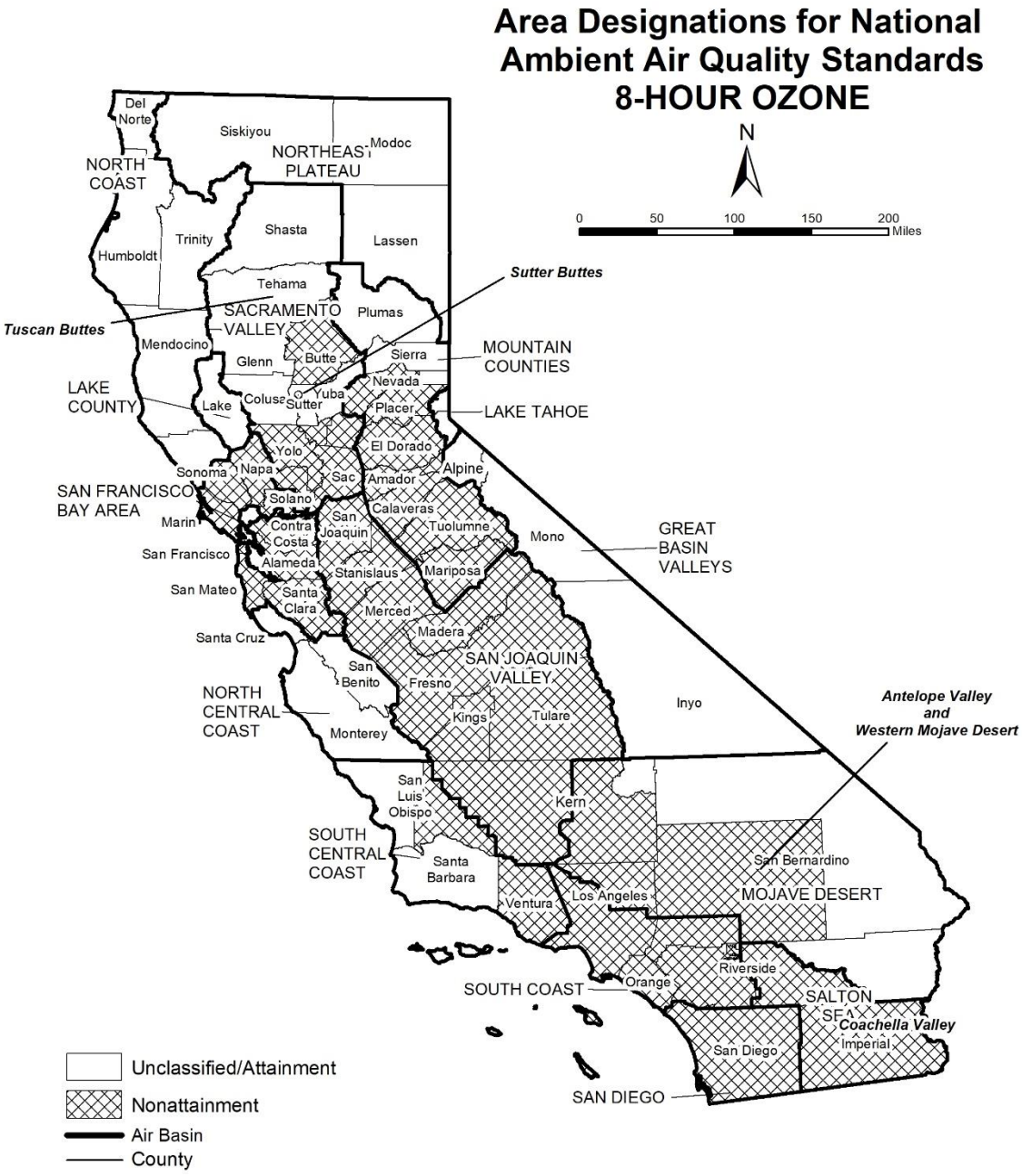
On June 2, 2010, the U.S. EPA established a new primary 1-hour SO_2 standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual average standards. Area designations for the 1-hour SO_2 standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15 µg/m^3. Designations were made for this standard in November 2010.

Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at: *https://ecfr.io/Title-40/se40.20.81_1305*

Figure 11



Last Updated: October 2021
Map reflects the 2015 8-hour ozone standard of 0.070 ppm
Air Quality Planning and Science Division, CARB

Table 11
National Ambient Air Quality Standards Area Designations for 8-Hour Ozone*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		
Amador County	N	
Calaveras County	N	
El Dorado County (portion)[1]	N	
Mariposa County	N	
Nevada County		
- Western Nevada County	N	
- Remainder of County		U/A
Placer County (portion)[1]	N	
Plumas County		U/A
Sierra County		U/A
Tuolumne County	N	
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		
Butte County	N	
Colusa County		U/A
Glenn County		U/A
Sacramento Metro Area[1]	N	
Shasta County		U/A
Sutter County		
- Sutter Buttes	N	
- Southern portion of Sutter County[1]	N	
- Remainder of Sutter County		U/A
Tehama County		
- Tuscan Buttes	N	
- Remainder of Tehama County		U/A

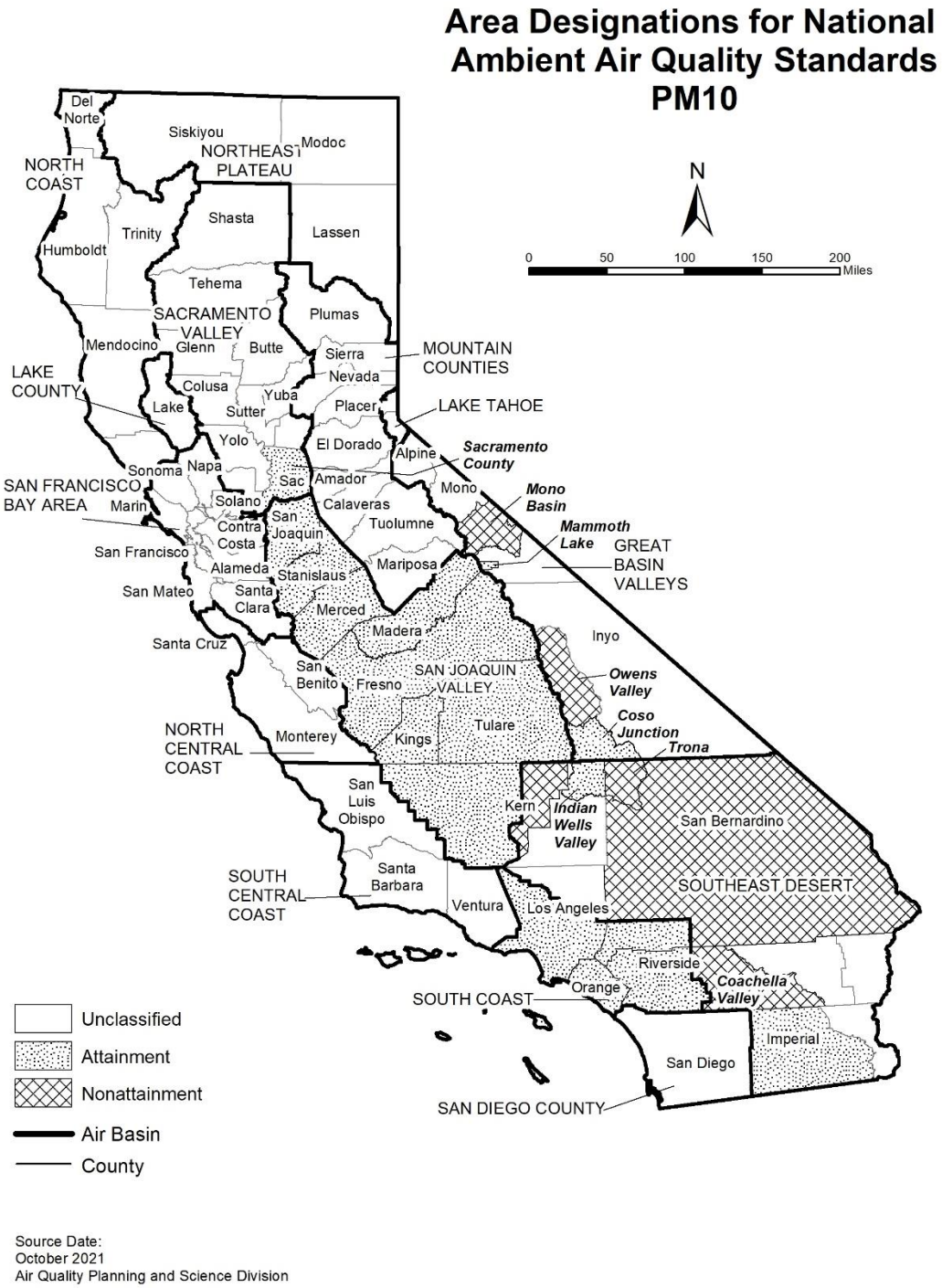
	N	U/A
SACRAMENTO VALLEY AIR BASIN (cont.)		
Yolo County[1]	N	
Yuba County		U/A
SAN DIEGO COUNTY	N	
SAN FRANCISCO BAY AREA AIR BASIN	N	
SAN JOAQUIN VALLEY AIR BASIN	N	
SOUTH CENTRAL COAST AIR BASIN[2]		
San Luis Obispo County		
- Eastern San Luis Obispo County	N	
- Remainder of County		U/A
Santa Barbara County		U/A
Ventura County		
- Area excluding Anacapa and San Nicolas Islands	N	
- Channel Islands[2]		U/A
SOUTH COAST AIR BASIN[2]	N	
SOUTHEAST DESERT AIR BASIN		
Kern County (portion)	N	
- Indian Wells Valley		U/A
Imperial County	N	
Los Angeles County (portion)	N	
Riverside County (portion)		
- Coachella Valley	N	
- Non-AQMA portion		U/A
San Bernardino County		
- Western portion (AQMA)	N	
- Eastern portion (non-AQMA)		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and Table reflect the 2015 8-hour ozone standard of 0.070 ppm.

[1] For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

[2] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
South Coast Air Basin:
Los Angeles County includes San Clemente and Santa Catalina Islands.

Figure 12



Source Date:
October 2021
Air Quality Planning and Science Division

Table 12
National Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM_{10})*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			
Alpine County		U	
Inyo County			
- Owens Valley Planning Area	N		
- Coso Junction			A
- Remainder of County		U	
Mono County			
- Mammoth Lake Planning Area			A
- Mono Lake Basin	N		
- Remainder of County		U	
LAKE COUNTY AIR BASIN		U	
LAKE TAHOE AIR BASIN		U	
MOUNTAIN COUNTIES AIR BASIN		U	
NORTH CENTRAL COAST AIR BASIN		U	
NORTH COAST AIR BASIN		U	
NORTHEAST PLATEAU AIR BASIN		U	
SACRAMENTO VALLEY AIR BASIN			
Sacramento County[1]			A
Remainder of Air Basin		U	
SAN DIEGO COUNTY		U	

	N	U	A
SAN FRANCISCO BAY AREA AIR BASIN		U	
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN		U	
SOUTH COAST AIR BASIN			A
SOUTHEAST DESERT AIR BASIN			
Eastern Kern County			
- Indian Wells Valley			A
- Portion within San Joaquin Valley Planning Area	N		
- Remainder of County		U	
Imperial County			
- Imperial Valley Planning Area[2]			A
- Remainder of County		U	
Los Angeles County (portion)		U	
Riverside County (portion)			
- Coachella Valley	N		
- Non-AQMA portion		U	
San Bernardino County			
- Trona	N		
- Remainder of County	N		

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

[1] Air quality in Sacramento County meets the national PM_{10} standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

[2] The request for redesignation to attainment for the Imperial Valley Planning Area was approved by U.S. EPA in September 2020, effective October 2020.

Figure 13

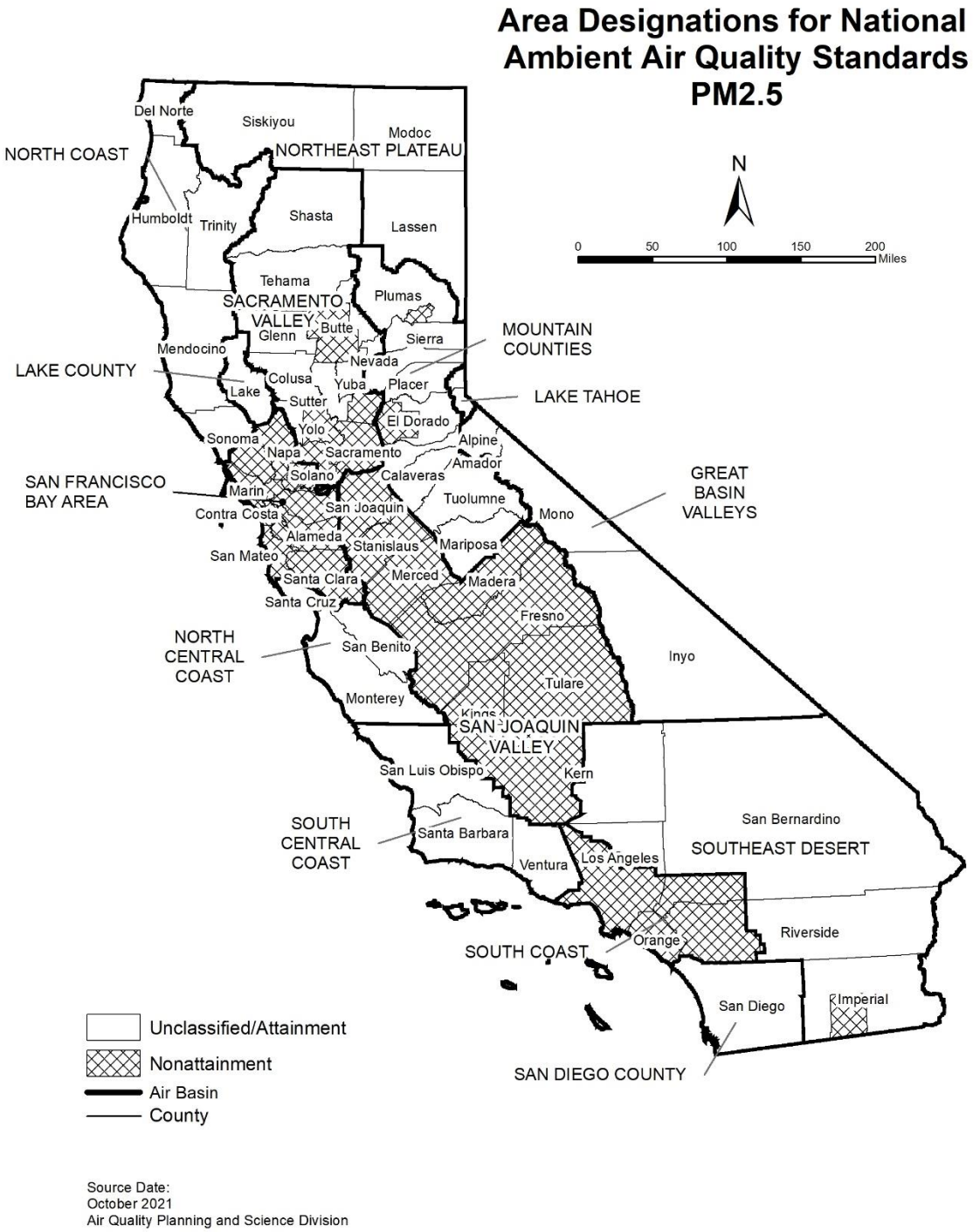

Area Designations for National Ambient Air Quality Standards PM2.5
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTH COAST
NORTHEAST PLATEAU
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
SACRAMENTO VALLEY
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Mendocino
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Sonoma
Alpine
Napa
Sacramento
Amador
Solano
Calaveras
SAN FRANCISCO BAY AREA
Marin
Tuolumne
GREAT BASIN VALLEYS
Contra Costa
San Joaquin
Mono
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
NORTH CENTRAL COAST
San Benito
Inyo
Tulare
Monterey
Kings
SAN JOAQUIN VALLEY
San Luis Obispo
Kern
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 13
National Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		
Plumas County		
- Portola Valley Portion of Plumas	N	
- Remainder of Plumas County		U/A
Remainder of Air Basin		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		
Sacramento Metro Area[1]	N	
Remainder of Air Basin		U/A

	N	U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN[2]	N	
SAN JOAQUIN VALLEY AIR BASIN	N	
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN[3]	N	
SOUTHEAST DESERT AIR BASIN		
Imperial County (portion)[4]	N	
Remainder of Air Basin		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour $PM_{2.5}$ standard as well as the 1997 and 2012 $PM_{2.5}$ annual standards.

[1] For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[2] Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[3] Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

[4] That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

Figure 14


Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 14
National Ambient Air Quality Standards Area Designations for Carbon Monoxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A

	N	U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 15


Area Designations for National Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
Colusa
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Marin
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Los Angeles
San Bernardino
Ventura
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
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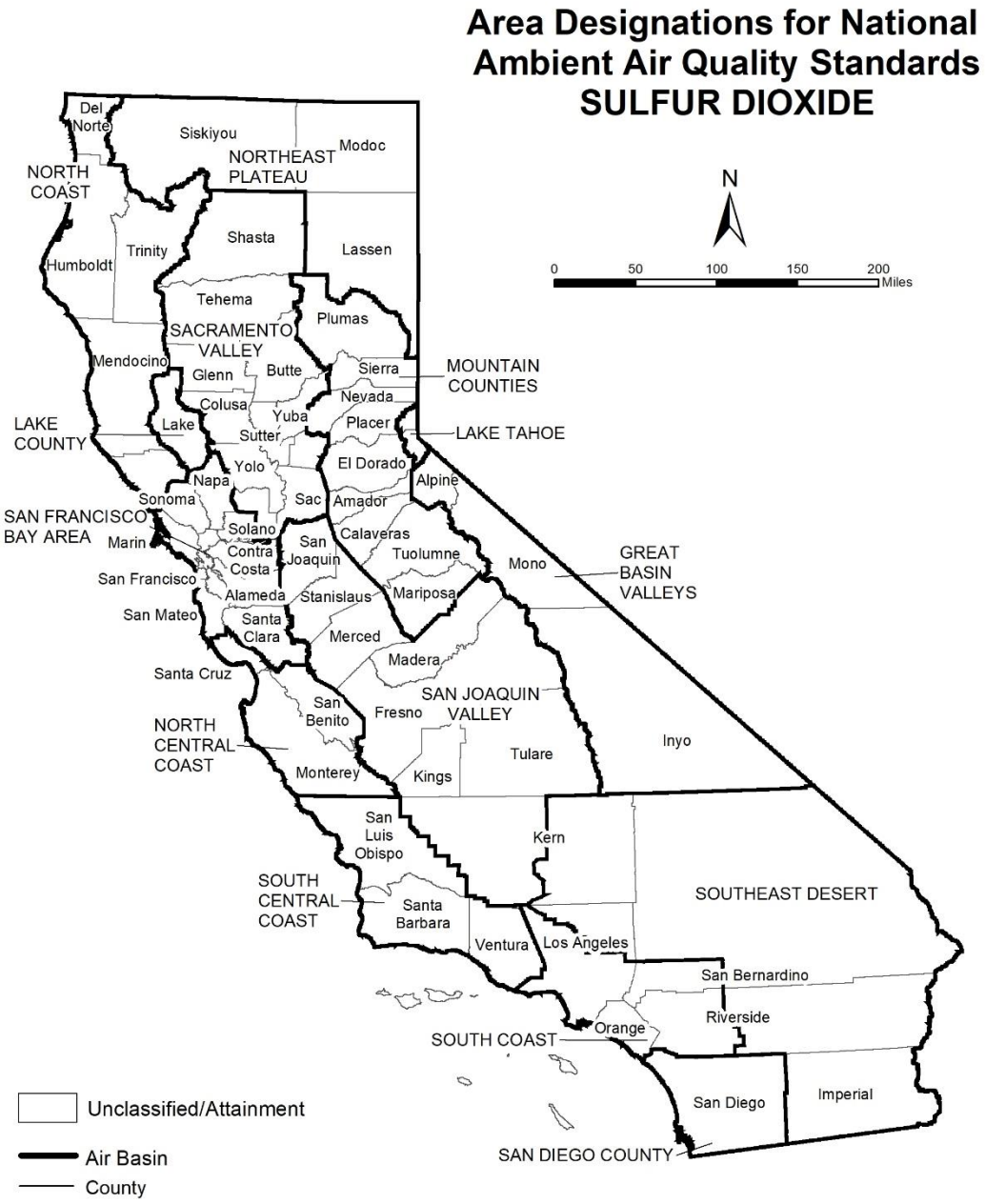
Table 15
National Ambient Air Quality Standards Area Designations for Nitrogen Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A

	N	U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 16



Source Date:
October 2021
Air Quality Planning and Science Division

Table 16
National Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN[1]		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and table reflect the 2010 1-hour SO_2 standard of 75 ppb.

[1] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

Figure 17


Area Designations for National Ambient Air Quality Standards
LEAD
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 17
National Ambient Air Quality Standards Area Designations for Lead (particulate)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		U/A

	N	U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		
Los Angeles County (portion)[1]	N	
Remainder of Air Basin		U/A
SOUTHEAST DESERT AIR BASIN		U/A

[1] Portion of County in Air Basin, not including Channel Islands

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APPENDIX 3.1:

CALEEMOD PROJECT EMISSIONS MODEL OUTPUTS

15178 - Racoon Ave Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15178 - Racoon Ave
Construction Start Date	1/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.542422, -117.444046
County	San Bernardino-Mojave Desert
City	Adelanto
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5104
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.12

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Parking Lot	66.0	Acre	66.0	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.88	90.8	21.3	27.1	0.04	0.97	0.20	1.17	0.89	0.05	0.94	—	4,544	4,544	0.18	0.04	0.87	4,562
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.90	4.04	59.7	36.8	0.20	1.85	8.49	10.3	1.74	2.74	4.21	—	28,124	28,124	0.30	3.41	1.20	29,147
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.97	3.47	8.46	8.46	0.02	0.34	0.45	0.79	0.32	0.15	0.46	—	2,413	2,413	0.06	0.15	0.84	2,461
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.63	1.54	1.54	< 0.005	0.06	0.08	0.14	0.06	0.03	0.08	—	400	400	0.01	0.02	0.14	407

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.88	90.8	21.3	27.1	0.04	0.97	0.20	1.17	0.89	0.05	0.94	—	4,544	4,544	0.18	0.04	0.87	4,562
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.90	4.04	59.7	36.8	0.20	1.85	8.49	10.3	1.74	2.74	4.21	—	28,124	28,124	0.30	3.41	1.20	29,147
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.97	3.47	8.46	8.46	0.02	0.34	0.45	0.79	0.32	0.15	0.46	—	2,413	2,413	0.06	0.15	0.84	2,461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.18	0.63	1.54	1.54	< 0.005	0.06	0.08	0.14	0.06	0.03	0.08	—	400	400	0.01	0.02	0.14	407

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	0.67	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,149	3,149	0.25	0.06	2.99	3,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.64	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,083	3,083	0.25	0.06	0.08	3,106
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.65	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,098	3,098	0.25	0.06	1.29	3,123
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.12	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.00	513	513	0.04	0.01	0.21	517

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Area	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.25	0.67	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,149	3,149	0.25	0.06	2.99	3,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Area	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.64	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,083	3,083	0.25	0.06	0.08	3,106
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	0.20	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	692	692	0.02	0.03	1.29	703
Area	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.65	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,098	3,098	0.25	0.06	1.29	3,123

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116
Area	0.00	0.08	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	398	398	0.04	< 0.005	—	401
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.12	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.00	513	513	0.04	0.01	0.21	517

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.06	0.59	0.54	< 0.005	0.03	—	0.03	0.02	—	0.02	—	87.1	87.1	< 0.005	< 0.005	—	87.4
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.91	3.91	< 0.005	< 0.005	0.01	3.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	2.71	2.71	—	0.99	0.99	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.41	1.24	< 0.005	0.06	—	0.06	0.05	—	0.05	—	271	271	0.01	< 0.005	—	272
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.26	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.9	44.9	< 0.005	< 0.005	—	45.0
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	0.03	267
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.60	0.42	25.3	5.39	0.14	0.40	5.52	5.92	0.40	1.41	1.82	—	21,262	21,262	0.02	3.34	1.17	22,259
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.02	1.04	0.22	0.01	0.02	0.23	0.24	0.02	0.06	0.07	—	873	873	< 0.005	0.14	0.80	915
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.19	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	145	145	< 0.005	0.02	0.13	151

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	5.13	6.00	0.01	0.23	—	0.23	0.21	—	0.21	—	1,110	1,110	0.05	0.01	—	1,114
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.94	1.10	< 0.005	0.04	—	0.04	0.04	—	0.04	—	184	184	0.01	< 0.005	—	184
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	15.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.6	45.6	< 0.005	< 0.005	—	45.7
Paving	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.54	7.54	< 0.005	< 0.005	—	7.57
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.08	1.35	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	224	224	0.01	0.01	0.87	227
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.14	6.14	< 0.005	< 0.005	0.01	6.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.02	1.02	< 0.005	< 0.005	< 0.005	1.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	72.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.37	5.37	< 0.005	< 0.005	—	5.38
Architectural Coatings	—	2.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.89	0.89	< 0.005	< 0.005	—	0.89
Architectural Coatings	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Total	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Total	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116
Total	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	398	398	0.04	< 0.005	—	401
Total	—	—	—	—	—	—	—	—	—	—	—	—	398	398	0.04	< 0.005	—	401

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.08	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/1/2024	1/8/2024	5.00	6.00	40
Grading	Grading	1/9/2024	1/29/2024	5.00	15.0	110
Building Construction	Building Construction	1/30/2024	8/30/2024	5.00	154	1110
Paving	Paving	8/16/2024	8/30/2024	5.00	11.0	75
Architectural Coating	Architectural Coating	8/16/2024	8/30/2024	5.00	11.0	75

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	305	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	0.00	172,498

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	21.0	0.00	—
Grading	—	36,600	60.0	0.00	—
Paving	0.00	0.00	0.00	0.00	66.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Parking Lot	66.0	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Parking Lot	30.0	30.0	30.0	10,961	845	845	845	308,543

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	172,498

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Parking Lot	2,518,465	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.2	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	9.25	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.6

AQ-PM	6.97
AQ-DPM	3.24
Drinking Water	60.3
Lead Risk Housing	43.3
Pesticides	43.5
Toxic Releases	26.0
Traffic	5.26
Effect Indicators	—
CleanUp Sites	88.3
Groundwater	71.8
Haz Waste Facilities/Generators	94.4
Impaired Water Bodies	51.2
Solid Waste	72.4
Sensitive Population	—
Asthma	88.1
Cardio-vascular	99.6
Low Birth Weights	64.2
Socioeconomic Factor Indicators	—
Education	84.8
Housing	77.6
Linguistic	69.8
Poverty	93.2
Unemployment	88.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	5.838573078
Employed	0.179648402
Median HI	1.424355191
Education	—
Bachelor's or higher	10.07314256
High school enrollment	100
Preschool enrollment	10.97138458
Transportation	—
Auto Access	34.2871808
Active commuting	2.399589375
Social	—
2-parent households	21.86577698
Voting	16.77146157
Neighborhood	—
Alcohol availability	93.53265751
Park access	6.877967407
Retail density	4.504042089
Supermarket access	2.399589375
Tree canopy	0.089824201
Housing	—
Homeownership	43.48774541
Housing habitability	26.22866675
Low-inc homeowner severe housing cost burden	67.79160785
Low-inc renter severe housing cost burden	0.295136661
Uncrowded housing	44.92493263
Health Outcomes	—

Insured adults	12.17759528
Arthritis	2.7
Asthma ER Admissions	7.4
High Blood Pressure	6.0
Cancer (excluding skin)	32.7
Asthma	1.7
Coronary Heart Disease	2.7
Chronic Obstructive Pulmonary Disease	0.4
Diagnosed Diabetes	6.3
Life Expectancy at Birth	15.8
Cognitively Disabled	24.2
Physically Disabled	71.5
Heart Attack ER Admissions	1.0
Mental Health Not Good	3.8
Chronic Kidney Disease	5.2
Obesity	15.0
Pedestrian Injuries	19.6
Physical Health Not Good	2.6
Stroke	3.3
Health Risk Behaviors	—
Binge Drinking	73.8
Current Smoker	0.7
No Leisure Time for Physical Activity	11.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	19.0

Elderly	85.6
English Speaking	37.4
Foreign-born	40.5
Outdoor Workers	7.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.7
Traffic Density	5.6
Traffic Access	23.0
Other Indices	—
Hardship	87.5
Other Decision Support	—
2016 Voting	26.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	89.0
Healthy Places Index Score for Project Location (b)	1.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data Building, Paving, and Architectural Coating overlap to present a conservative analysis Construction schedule compressed to account for 2024 Opening Year
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Operations: Vehicle Data	Trip characteristics based on information from the Trip Analysis

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APPENDIX B
Biological Resources Assessment

Copart 66

City of Adelanto, San Bernardino County, California

APN #: 3128-341- [01, 02, 04, 06]

BIOLOGICAL RESOURCES ASSESSMENT REPORT

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December 2023

Copart 66
City of Adelanto, San Bernardino County, California

BIOLOGICAL RESOURCES ASSESSMENT REPORT

The undersigned certifies that this Report is a complete and accurate account of the findings and conclusions of a biological resources assessment for the above-referenced project.



Kimberly Boydstun
Senior Biologist/Project Manager

December 2023

Executive Summary

On behalf of Copart Inc., Casc Engineering and Consulting, Inc. has prepared this Biological Resources Assessment Report in support of development of a parking lot to store "totalled" vehicles (i.e, cars, trailers, trucks, recreational vehicles, etc.). The Project Site is 65.95 acres of vacant land (Accessor's Parcel Number 3128-341- [01, 02, 04, 06]) in the City of Adelanto, San Bernardino Angeles County, California.

The mitigation measures proposed in this report are intended to mitigate all impacts to **less than significant**. For this report, the Survey Area is defined as the Project Site (65.95 acres) plus a 500-foot buffer. Focused surveys for plants and wildlife were not conducted for this report.

Two (2) special-status plant species sagebrush loeflingia *(Loeflingia squarrosa* var. *artemisiarum*) and western Joshua tree (*Yucca brevifolia)* were identified as having the potential to occur within the Survey Area.

Sagebrush loeflingia is known to occur within the region. Recent occurrence records identified this species within 5 miles of the Survey Area. However, the Survey Area is outside of the normal expected elevational range of the species and the Project Site lacks the associated dunes, sagebrush scrub, or creosote scrub communities where this species is associated. Focused surveys for this species were not conducted during the spring blooming period. However, during the April site visit, this species was not observed at the Project Site. Therefore, this species is **not expected to occur** on the Project Site.

Western Joshua tree was observed during the field surveys and is **present** on the Project Site and is well documented in the region. Removal of the trees will be necessary for Project development. Mitigation measures **BIO-1** and **BIO-2** will reduce any potential impacts to western Joshua tree to **less than significant**.

Special-status vegetation communities were **absent** from the Survey Area.

Six (6) special-status wildlife species were identified as having the potential to occur within the Survey Area: western burrowing owl (*Athene cunicularia*), Mohave ground squirrel (*Xerospermophilus mohavensis*), desert tortoise (*Gopherus agassizii*), loggerhead shrike (*Lanius ludovicianus*), Le Conte's thrasher (*Toxostoma lecontei),* and Swainson's hawk, (*Buteo swainsoni*).

Western burrowing owl is considered locally significant within the City of Adelanto and the County of San Bernardino, and a Species of Special Concern as identified by the California Department of Fish and Wildlife (CDFW). This species was not observed during the site assessment but based on a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that this species has a **high likelihood of**

occurrence within the Survey Area. **Mitigation Measure BIO-3 and BIO-4** will mitigate all impacts to western burrowing owl to **less than significant**.

Mohave ground squirrel is a state listed threatened species. Recent occurrence records indicated this species occurs within one-half mile of the Project Site and is documented to occur within region. The species was not observed during the site assessment. Based on the results of the field survey, and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that this species has a **high likelihood of occurrence** within the Survey Area. **Mitigation Measure BIO-5 and BIO-6** will mitigate all impacts to Mohave ground squirrel to **less than significant**.

Desert tortoise is a State and federally listed threatened species. According to the CDFW literature search there is a recorded occurrence approximately one mile (1) northwest of the Survey Area. Desert tortoise nor its sign was not observed during the site assessment but based on a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that this species has a **low likelihood of occurrence** within the Survey Area. **Mitigation Measure BIO-7** will mitigate all impacts to desert tortoise to **less than significant**.

Three (3) special-status bird species loggerhead shrike, Le Conte's thrasher, and Swainson's hawk have **potential** to occur within the Survey Area. **Mitigation Measure BIO-8** will mitigate any impacts to these special-status birds to **less than significant** while protecting common nesting birds and providing concurrence with the Migratory Bird Treaty Act.

Loggerhead shrike is considered locally significant within the City of Adelanto and the County of San Bernardino and a CDFW Species of Special Concern. According to the CDFW literature search there was a recorded occurence within a five (5) mile radius of the Survey Area. Loggerhead shrike was not oberserved during the site assessment but based on a review of specific habitat preferences, occurrence records, and known distributions, it was determined that this species has a **low likelihood of occurrence** within the Survey Area.

Le Conte's thrasher is considered locally significant within the City of Adelanto and the County of San Bernardino and a CDFW Species of Special Concren. According to the CDFW literature search there have been recorded occurences with in a five (5) mile radius of the Survey Area. Le Conte's thrasher was not oberserved during the site assessment but based on a review of specific habitat preferences, occurrence records, known distributions, lack of suitable habitat and elevation ranges, it was determined that this species has a **low likelihood of occurrence** within the Survey Area..

Swainson's hawk is a State listed threatened species. According to the CDFW literature search there is a recorded occurrence approximately two miles (2) northeast of the Survey Area. The species was not observed during the site assessment but based on a review of specific habitat

preferences, occurrence records, known distributions, and elevation ranges, it was determined that this species has **a low likelihood of occurrence** within the Survey Area.

An unnamed **ephemeral drainage** feature bisects the Project Site. A Wetland Delineation was performed during December 2023. The results determined the feature is a non-wetland feature and unlikely to be considered jurisdictional by the United States Army Corps of Engineers (USACE) but may still be considered jurisdictional by the California Regional Water Quality Control Board (RWQCB) and CDFW. There are no wetland features on the Project Site.

Impacts to **jurisdictional waters** would require permit authorizations from the USACE via a Section 404(b)(1) Permit Program, from the CDFW via a 1602 Streambed Alteration Agreement, and from the RWQCB via a 401 State Water Quality Certification. Compensatory mitigation for impacts to jurisdictional waters would be addressed in a mitigation plan to be submitted for approval with the permit application packages. Authorized impacts to jurisdictional waters would require in-kind mitigation through habitat creation, enhancement, or preservation to achieve a no-net-loss of jurisdictional waters.

The Project Site does not function as a **designated wildlife corridor** within the County of San Bernardino, there is no **U.S. Fish and Wildlife Service-designated critical habitat** within the Survey Area.

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LIST OF ACRONYMS AND ABBREVIATIONS

amsl	Above Mean Sea Level
Casc	Casc Engineering and Consulting, Inc.
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
°F	Fahrenheit
FESA	Federal Endangered Species Act
ft	Feet
IPaC	Information for Planning and Consultation online system
MCV	Manual of California Vegetation
MBTA	Migratory Bird Treaty Act
mph	Miles Per Hour
NWI	National Wetlands Inventory
MOU	Memorandum of Understanding
Project	Copart 66
Survey Area	Project Site plus 500ft Buffer
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WJT	Western Joshua Tree
WJTCA	Western Joshua Tree Conservation Act

Section 1 Introduction

On behalf of Copart, Inc., Casc Engineering and Consulting (Casc) has prepared this Biological Resources Assessment Report (Report) for development of a fully paved car storage lot for wrecked cars with an adjacent parking area on a vacant parcel in the City of Adelanto, San Bernardino County, California. This Report describes the biological resources, record searches and literature review, survey methodology, and results of the biological resources survey and review conducted for the Project.

1.1 PROJECT LOCATION

The Project Site is located on the corner of Holly Road and Racoon Avenue in the City of Adelanto. The Project will include the development of a parking lot to store all totaled vehicle types at the facility (i.e. cars, trailers, trucks, rv's, etc.) in the City of Adelanto, San Bernardino County, California (Figure 1, Regional Vicinity).

1.2 PROJECT BACKGROUND AND DESCRIPTION

The Project Site consists of 65.95 gross acres located on the southwest corner of Racoon Avenue and Holly Road in the City of Adelanto (APNs: 3128-341-01, 02, 04, and 06) as seen on U.S. Geological Society (USGS) 7.5-minute *Adelanto* Quadrangle (Figure 2, USGS Quadrangle Map). The surrounding properties are undeveloped and access to the site was unobstructed. The proposed Project will include the development of a parking lot to store totaled vehicles of all types including cars, trailers, trucks, recreational vehicles for the purpose of selling via online auctions, and to store throughout the insurance claim process. The Project Site is currently vacant and undeveloped. Proposed onsite improvements include grading, rock ballast surfacing, an eight-foot-tall perimeter fence to screen from street views, three (3) detention basins, a drainage corridor, and three (3) commercial entrances that will be paved and gated. Off-site improvements include curb and gutter, sidewalk, landscape easements, and a culvert storm drain north of Cactus Road. Site Plans are provided in Appendix A, Conceptual Plans.

1.3 PURPOSE OF DOCUMENT

This Report documents all biological resources identified within the Survey Area during a general biological resource survey conducted by Casc biologists. The Survey Area included the Project Site plus a 500-foot buffer (where accessible) (Figure 3, Project Boundary and Photo Point Location Map). The Survey Area was surveyed to determine the likelihood of State-listed and/or federally listed rare, threatened, or endangered species, and other special-status[1] plants, animals,

[1] As used in this Report, "special-status" refers to plant and wildlife species that are federally-/State-listed, proposed, or candidates; plant species that have been designated a California Rare Plant Rank species by the California Native Plant Society; wildlife species that are designated by the California Department of Fish and Wildlife as Fully Protected, Species of Special Concern, or Watch List species; and State/locally rare vegetation communities.

and natural communities. This Report includes an analysis of the potential for the Survey Area to support special-status plant and wildlife species and special-status vegetation communities that have been previously recorded, or are known to occur within the vicinity, and that are subject to provisions of the Federal Endangered Species Act (FESA) of 1973, Migratory Bird Treaty Act (MBTA), California Endangered Species Act (CESA), California Environmental Quality Act (CEQA), California Fish and Game Code (CFGC), California Native. Plant Protection Act, and other local policies and ordinances protecting biological resources.

.



Figure 1

Regional Vicinity

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

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Aerial: ESRI World Imagery, San Bernardino County 2/5/2020; ESRI USA Topo Maps
County: ESRI USA Counties, accessed 5/18/2023
Map Date: 5/17/2023



N 0 2 4 Miles
1" = 4 Miles

7.5 Minute Quadrangle Index

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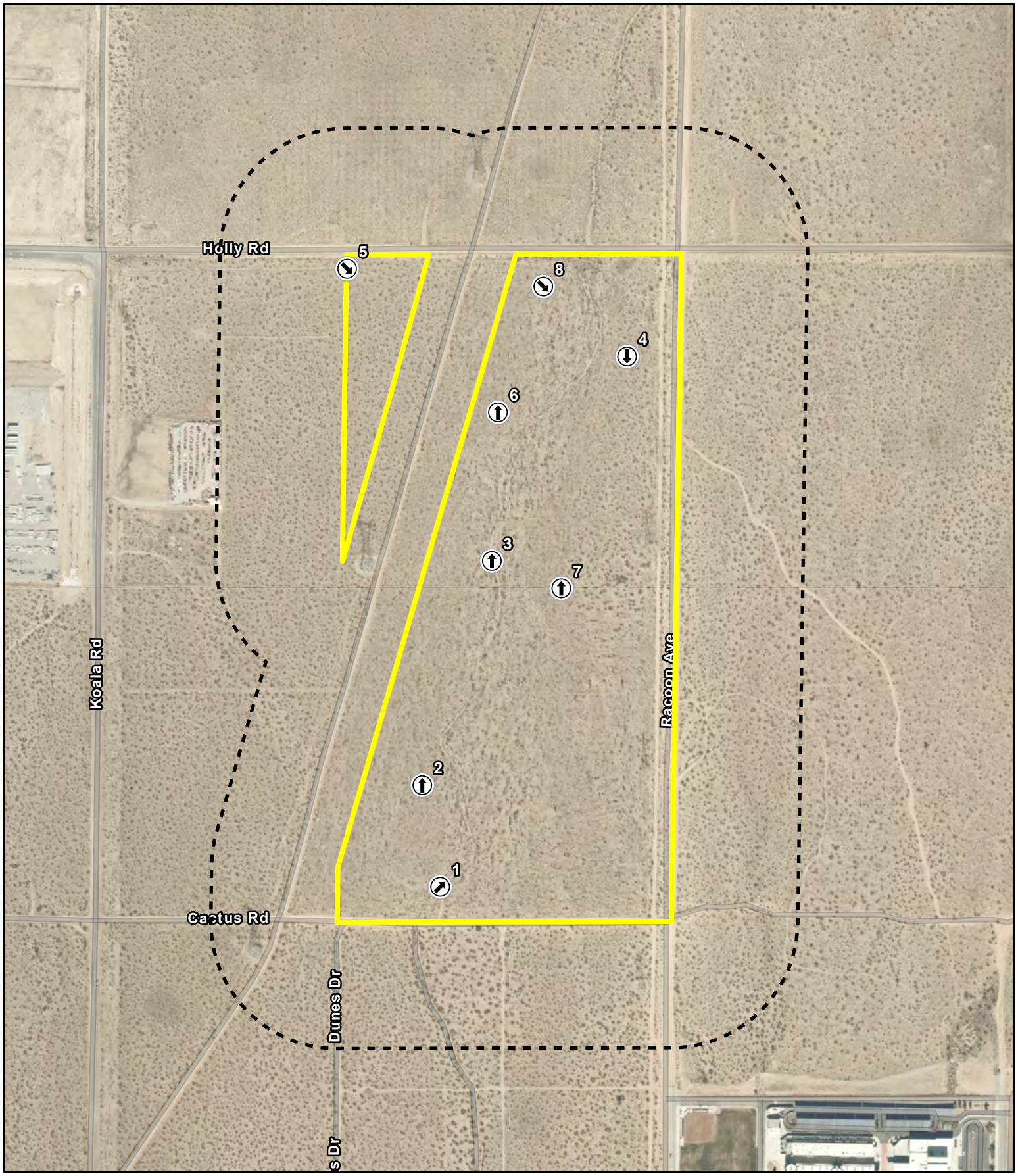
Aerial: ESRI World Topographic Map and World Hillshade
USGS 1:24,000 Topographic Maps 7.5- by 7.5-minute quadrangles, accessed 5/18/2023
Map Date: 5/18/2023

Figure 2

USGS Quadrangle Index

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd



N 0 250 500 Feet
1" = 500 Feet

Project Boundary
500-ft Buffer
Photo Points

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Aerial: ESRI World Imagery, San Bernardino County 2/5/2020
Parcel: San Bernardino Parcels, accessed 5/18/2023
Map Date: 5/18/2023

Figure 3
Project Boundary and Photo Point Location Map

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

Section 2 Methodology

2.1 LITERATURE REVIEW AND DATABASE SEARCHES

Prior to conducting the field surveys, Casc conducted a thorough literature review and records search of the Survey Area encompassing CDFW Biogeographic Information and Observation System (CDFW 2023a), CDFW California Natural Diversity Database (CNDDB) RareFind 5 (CDFW 2023b), BIOS 6, and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2023). In addition, the Survey Area was used to generate a Species and Resources List from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online system (IPaC; USFWS 2023a). This helped to identify special-status plant and wildlife species, vegetation communities, and other biological resources that have been previously documented within, near, and/or that have the potential to occur within the Survey Area. The *Special Animals List* (CDFW 2023c, *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2023d), and CNPS California Rare Plant Ranking System (CRPR) were reviewed for the current status of rare and endangered plant and wildlife species. Other resources reviewed include the USFWS Critical Habitat for Threatened & Endangered Species Mapper (USFWS [ArcGIS Online] 2023); recent and historical aerial photography (Google Earth Pro 2023); the U.S. Department of Agriculture, Natural Resources Conservation Service (USDA) Web Soil Survey (USDA 2023a); USFWS National Wetland Inventory (NWI) Mapper (USFWS 2023b), and National Hydrography Dataset Map (NHD 2023).

2.2 GENERAL BIOLOGICAL RESOURCES SURVEY

Following the literature review, Casc's biologists Kimberly Boydstun, Dennis Peterson, and Katelyn Faulkner, conducted a general biological resources assessment of the entire Survey Area over the course of four (4) days. The Survey Area is defined as the Project Site plus a 500-foot buffer where accessible (Figure 3). A total of four site visits were conducted were conducted to document existing site conditions, obtain an inventory of plant and wildlife species, map vegetation communities and current land use, determine the potential for special-status plant and wildlife resources to occur within the Survey Area, and to identify any potentially jurisdictional aquatic features. Representative photographs of the Project Site are provided in Appendix B, Project Site Photos.

Table 1. Survey Dates and Site Conditions

Date	Time	Temperature Fahrenheit (°F),	Winds Miles Per Hour (mph)
April 6, 2023	1100-1500	55 to 70 °F	2-3 mph, clear skies
November 8, 2023	1300-1500	55-65 °F	8-10 mph, clear skies
November 14, 2023	1000-1400	60-75 °F	5-7 mph, clear skies
November 17, 2023	1100-1400	60-75 °F	6-8 mph, clear skies

2.2.1 Vegetation/Land Use Mapping and Plant Species Inventory

Classification of the vegetation communities and other land uses within the Survey Area is based on the descriptions of terrestrial vegetation classification systems described in *A Manual of California Vegetation* (MCV Sawyer et al. 2009) and cross referenced with the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). The vegetation on site was classified as a ruderal species community. Plant species nomenclature and taxonomy follow *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al. 2012). Refer to Appendix C, Plant Compendia for a complete list of plant species observed within the Survey Area.

2.2.2 General Wildlife Observations

Field guides used to assist with identification of species during the habitat assessment included *The Sibley Guide to Birds* (Sibley 2014) for birds, *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003) for herpetofauna and *A Field Guide to Mammals of North America* (Reid 2006). Although common names of wildlife species are well standardized, scientific names are provided immediately following common names of wildlife species in this Report (first reference only). To the extent possible, nomenclature of birds follows the most recent annual supplement of the American Ornithological Union's *Checklist of North American Birds* (Chesser et. al. 2020), nomenclature of amphibians and reptiles follows *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding* (Crother 2012), and nomenclature for mammals follows the *Revised Checklist of North American Mammals North of Mexico* (Bradley et. al. 2014). All wildlife species observed and/or otherwise detected through signs (e.g., tracks, scat) were recorded. Other wildlife species may occupy the Survey Area but, in some cases, may be nocturnal and not easily detectable during the day without extensive survey efforts during the appropriate season. Some species are transients or migrants and may occupy the Survey Area other times of the year outside of the time that the field survey was conducted. Refer to Appendix D, Wildlife Compendia for a complete list of wildlife species observed or otherwise detected within the Survey Area.

2.2.3 Wildlife Corridors

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. The City of Adelanto identifies potential locations for Wildlife Corridors in the Open Space and Conservation Element of the General Plan (Adelanto North 2035 Comprehensive Sustainable Plan). Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. A wildlife corridor is generally represented by a linear patch of habitat that provides a connection between two core areas of the same habitat, allowing for the large-scale movement of species within their native habitats. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors are important because they provide access for breeding opportunities, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations.

2.3 OTHER FIELD STUDIES

A database search of the CDFW's CNDDB was used to identify and map all known (federally and State Threatened species) locations within five (5) miles of the Project Site as well as a comprehensive literature review of available previous biological studies and environmental documents completed for the Project and its vicinity. Casc's biologists also reviewed USFWS Critical Habitat documentation to determine the Project's location in relation to critical habitat (Figure 4, Critical Habitat) (USFWS [ArcGIS Online] 2023). There is no critical habitat on or within close proximity to the Project Site. Casc's biologists walked transects at a width of fifteen (15) feet to gain 100-percent visual coverage of the Survey Area and performed a habitat assessment for special-status plants and animals and burrow search of the Project Site with particular focus on western burrowing owl (*Athene cunicularia*), Mohave ground squirrel (*Xerospermophilus mohavensis*), and desert tortoise (*Gopherus agassizii*).

2.3.1 Special-Status Plants and Vegetation Communities

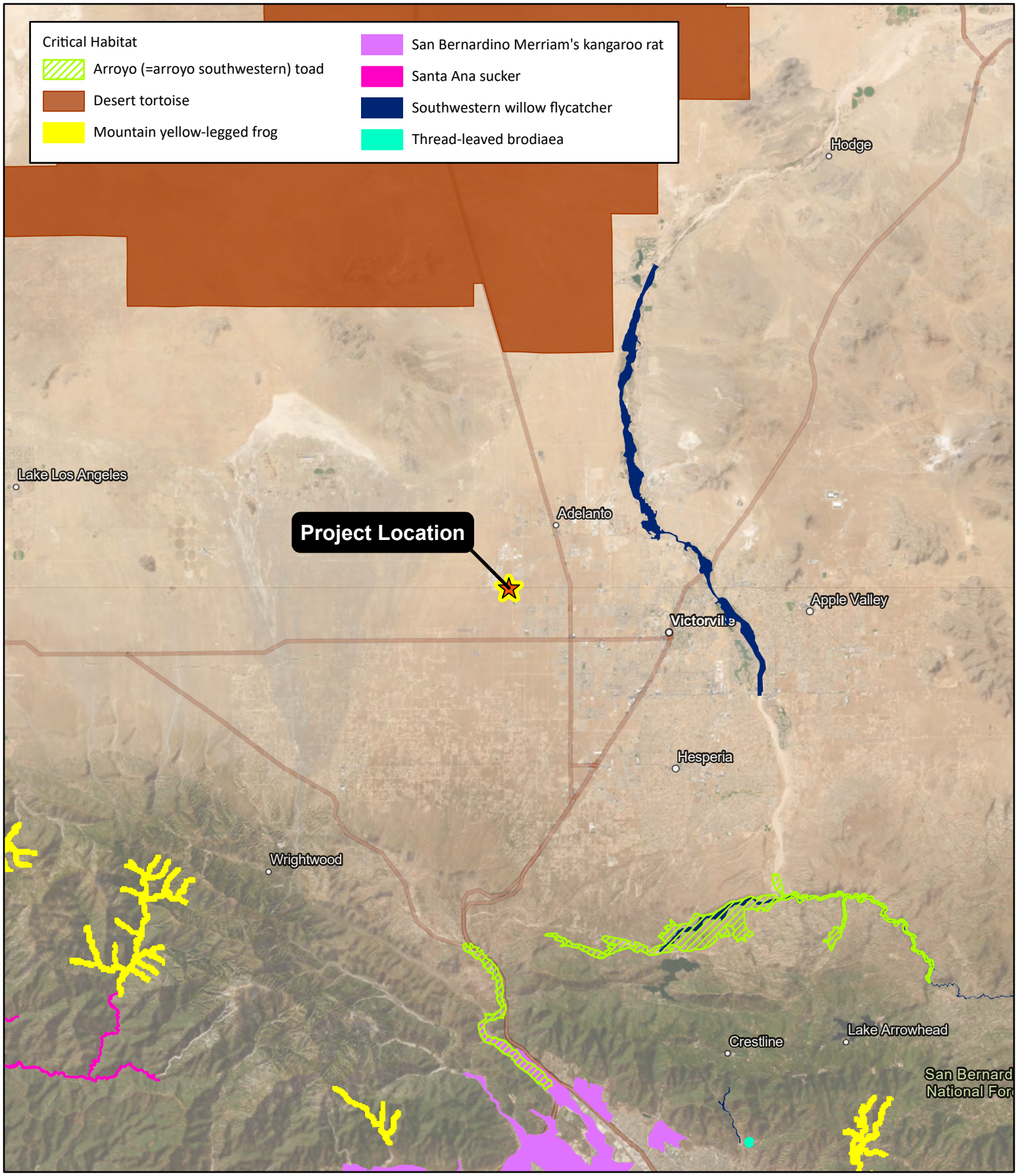
A database search of the CDFW's CNDDB and the CNPS Online Inventory of Rare and Endangered Plants was used to identify and map rare plant recorded within a five (5) mile radius of the Project Site. Based on the database search and literature review, it was determined that two (2) special-status plants occur on the Project region. However, no special-status vegetation communities were identified in the Survey Area. Refer to Figure 5, CNDDB 5-Mile Radius Map of Occurrences from California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB) search conducted for the Project to verify these findings.

2.3.2 Special-Status Wildlife

A database search of the CDFW's CNDDB and RareFind/Bios Online Inventory was used to identify and map wildlife records within a five (5) mile radius of the Project Site. Based on the database search and literature review, it was determined that a total of six (6) special-status wildlife species have the probability of occurrence within the general range of the Survey Area (Figure 5).

2.3.3 Jurisdictional Features Analysis

Casc conducted a thorough literature review of relevant resources to obtain an initial understanding of the environmental setting and to preliminarily identify features that could be regulated by the jurisdictional agencies. Casc reviewed the USFWS NWI Mapper (USFWS 2023b) and USGS National Hydrography Dataset Map (USGS National Hydrology Dataset Plus Version 2.1 accessed December 5, 2023) which determined, along with field verification, that there are potential jurisdictional features on the Project Site. Figure 6, National Wetlands Inventory Map and Figure 7, National Hydrography Dataset Map shows the results of the NWI and NHD Mapper searches.



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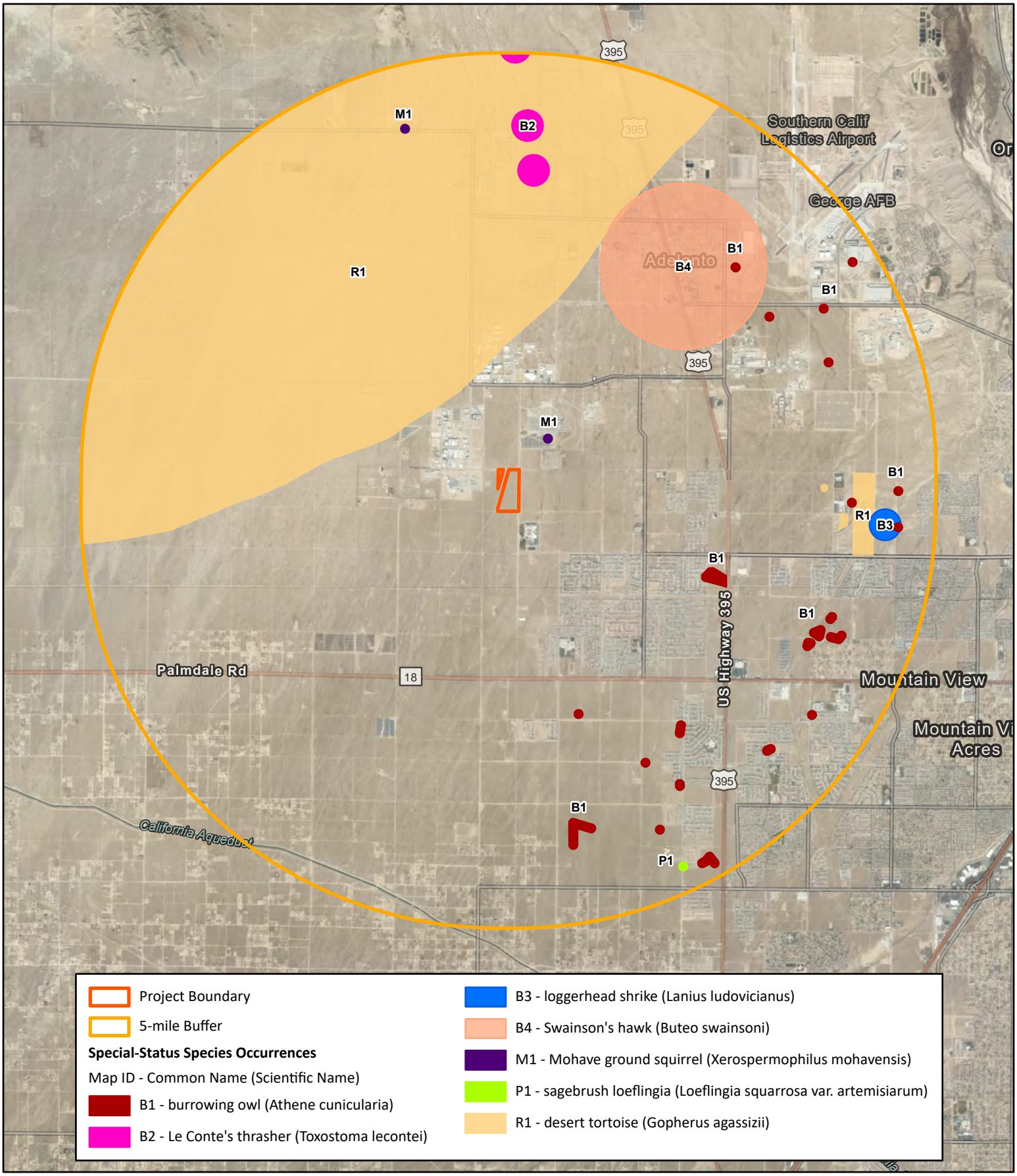
Aerial: ESRI World Imagery accessed 5/18/2023
Critical Habitat: US Fish & Wildlife Service, Updated 4/25/2023
Map Date: 5/18/2023

Figure 4

Critical Habitat

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd



N

0 1 2 Miles

1" = 2 Miles

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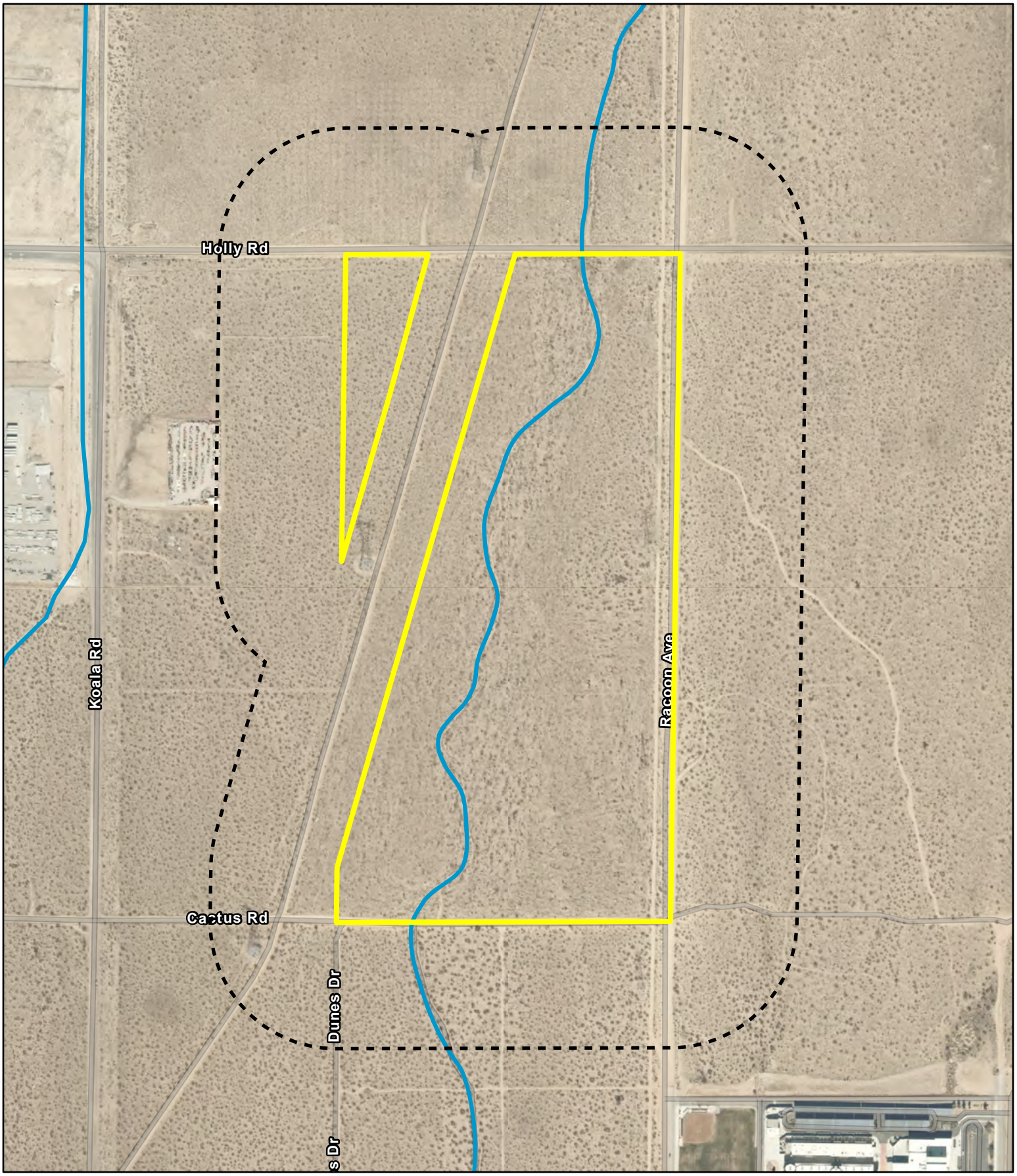
Aerial: ESRI World Imagery accessed 5/16/2023
CNDDB: California Department of Fish and Game, Current as of 4/30/2023
Map Date: 5/18/2023

Figure 5

CNDDB

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd



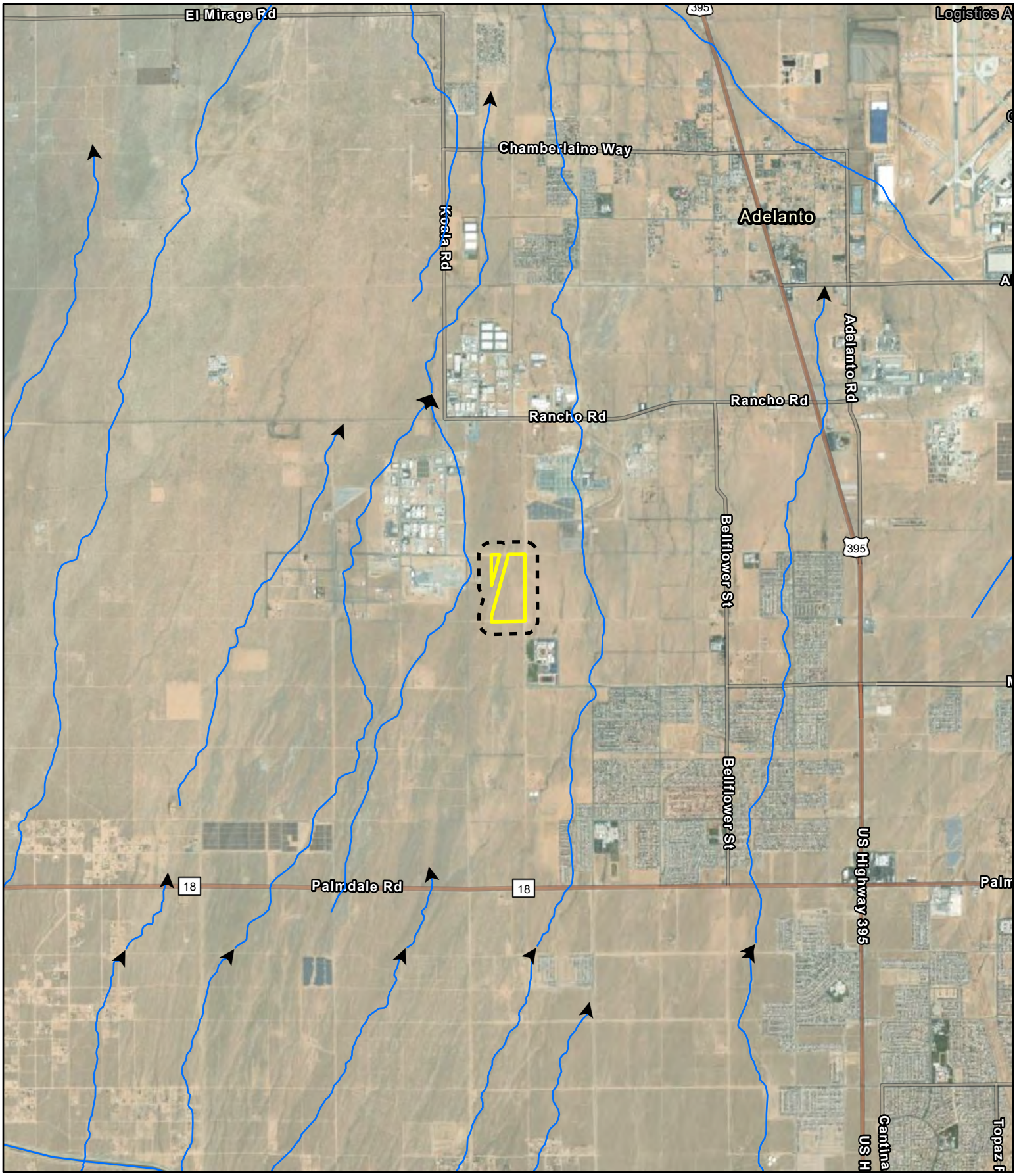
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Figure 6
National Wetland Inventory Map

APN: 3128-341-[01, 02, 04 & 06]

Aerial: ESRI World Imagery, San Bernardino County 2/5/2020
NWI: U.S. Fish and Wildlife Service 10/7/2022, accessed 5/19/2023
Map Date: 5/19/2023

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd



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Figure 7
National Hydrography Dataset Map

APN: 3128-341-[01, 02, 04 & 06]

Aerial: ESRI World Imagery, San Bernardino County 2/5/2020
NHD: USGS National Hydrology Dataset Plus Version 2.1 accessed 12/5/2023
Map Date: 12/5/2023

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

Section 3 Existing Conditions

The following is a summarization of the results of the database review and general biological resources survey performed by Casc. Discussions regarding the general environmental setting, vegetation communities and other land uses present, and plant and wildlife species observed are presented below. Representative photographs of the Project Site are provided in Appendix B, and a complete list of all the plant and wildlife species observed within the Survey Area during the field survey is provided in Appendix C and D, respectively.

3.1 ENVIRONMENTAL SETTING

The proposed Project Site consists of a 65.95-acre site (APNs: 3128-341-01, -02, -04, -06) located on the southwest corner of Holly Road and Raccoon Avenue. The Project site consists of predominately vacant land that is characterized by level terrain and light to moderate growth of native plants, trees, and shrubs. The proposed Project Site is vertically bisected by a City of Los Angeles Department of Water and Power utility easement that consists of transmission lines. The utility easement separates the Project Site into two portions, the northwestern portion which includes APNS 3128-341-01, -02, and the eastern portion of the site which contains APNS 3128-341-04, -06. The General Plan land use designation and zoning designation of the Project Site is Manufacturing/Industrial. Access to the entire site was unobstructed and the biologists were able to perform a one hundred percent visualization of the Survey Area. The parcel immediately south is currently under construction for Copart's main office and outdoor storage.

3.1.1 Climate

The City of Adelanto experiences a desert climate characterized by hot and arid conditions. Situated in the high desert region of San Bernardino County, the city enjoys long, scorching summers with temperatures often exceeding 100°F during the day, while nights offer some relief, cooling down significantly. Winters are generally mild, with daytime temperatures ranging from the 60 to low 70°F, and occasionally dropping to 30°F at night. Rainfall is scarce and mostly occurs during the winter months, making Adelanto's climate predominantly dry throughout the year. The region is also prone to occasional dust storms and strong winds due to its desert location. Residents and visitors alike need to take precautions to cope with the extreme heat and potential weather challenges that this climate brings. The average rainfall is typically 3-5 inches (U.S. Climate Data 2021).

3.2 TOPOGRAPHY AND SOILS

The Survey Area is in a region of San Bernardino County known as the "High Desert" due to its approximate elevation of 3,017 feet above mean sea level (amsl). The Survey Area is relatively flat with a consistent surface elevation.

Soils within the Survey Area and in adjoining areas were reviewed prior to the field survey using the Web Soil Survey (USDA 2021a) Figure 8, USDA Soils Map). Mapped soils within the Survey Area include the following:

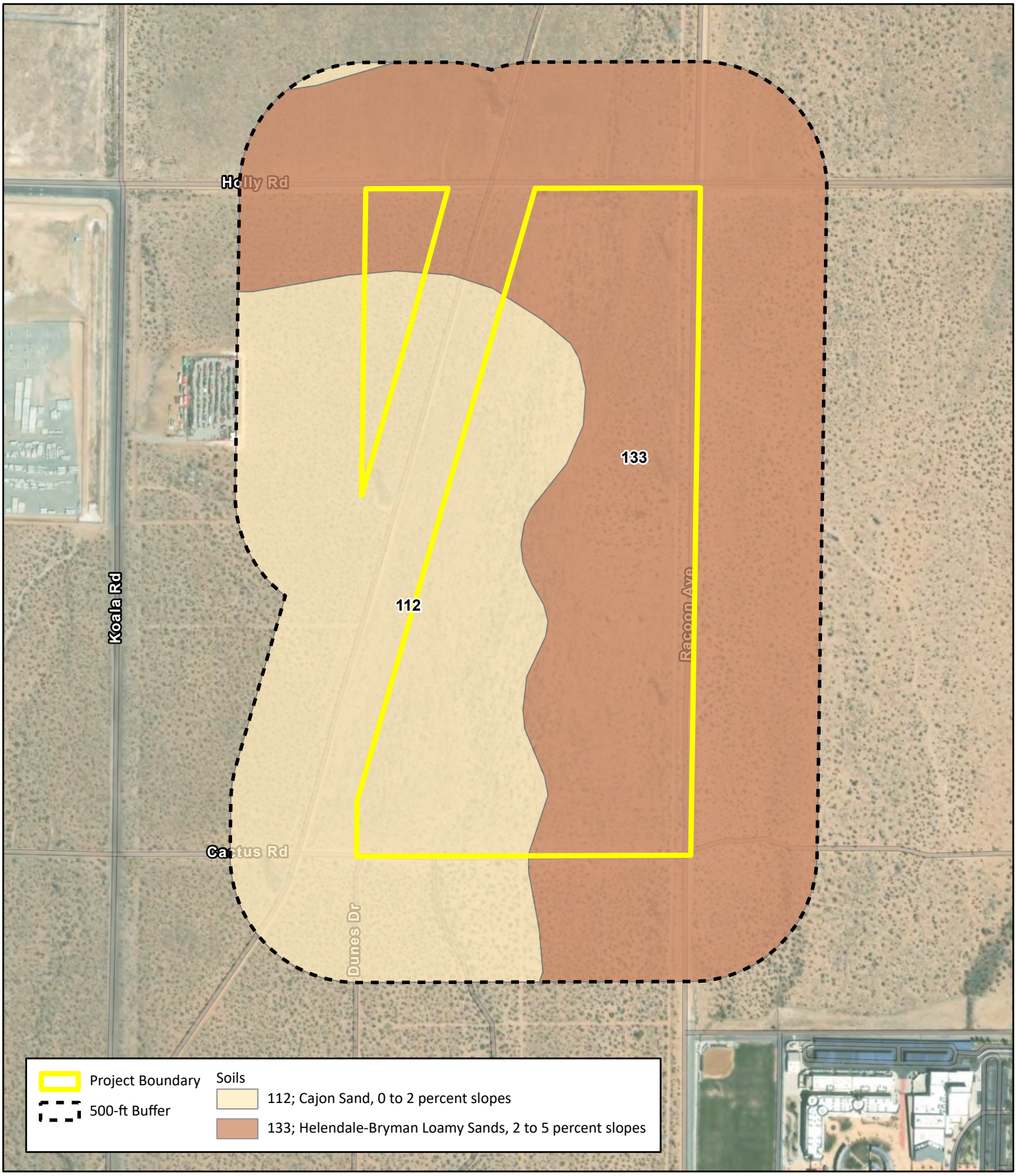
- Cajon Sand, 0 to 2 Percent Slopes
- Helendale-Bryman Loamy Sands, 2 to 5 Percent Slopes

3.3 VEGETATION COMMUNITIES AND OTHER LAND USES

The Survey Area is undeveloped with a vegetation community identified of creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and cheesebrush (*Ambrosia salsola*). Western Joshua tree (WJT) was present but not as a predominant feature of this vegetation community. Refer to Appendix C for a complete list of plant species observed during the field survey.

3.4 GENERAL WILDLIFE OBSERVATIONS

The Survey Area is dominated by disturbed native vegetation, ruderal species, and friable soils. Wildlife diversity during the field survey was generally low, likely due to the low diversity of the plant assemblage. Species observed within the Survey Area included mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), white-crowned sparrow (*Zonotrichia leucophrys*), and common raven (*Corvus corax*). Refer to Appendix D for a complete list of wildlife species observed during the field survey.



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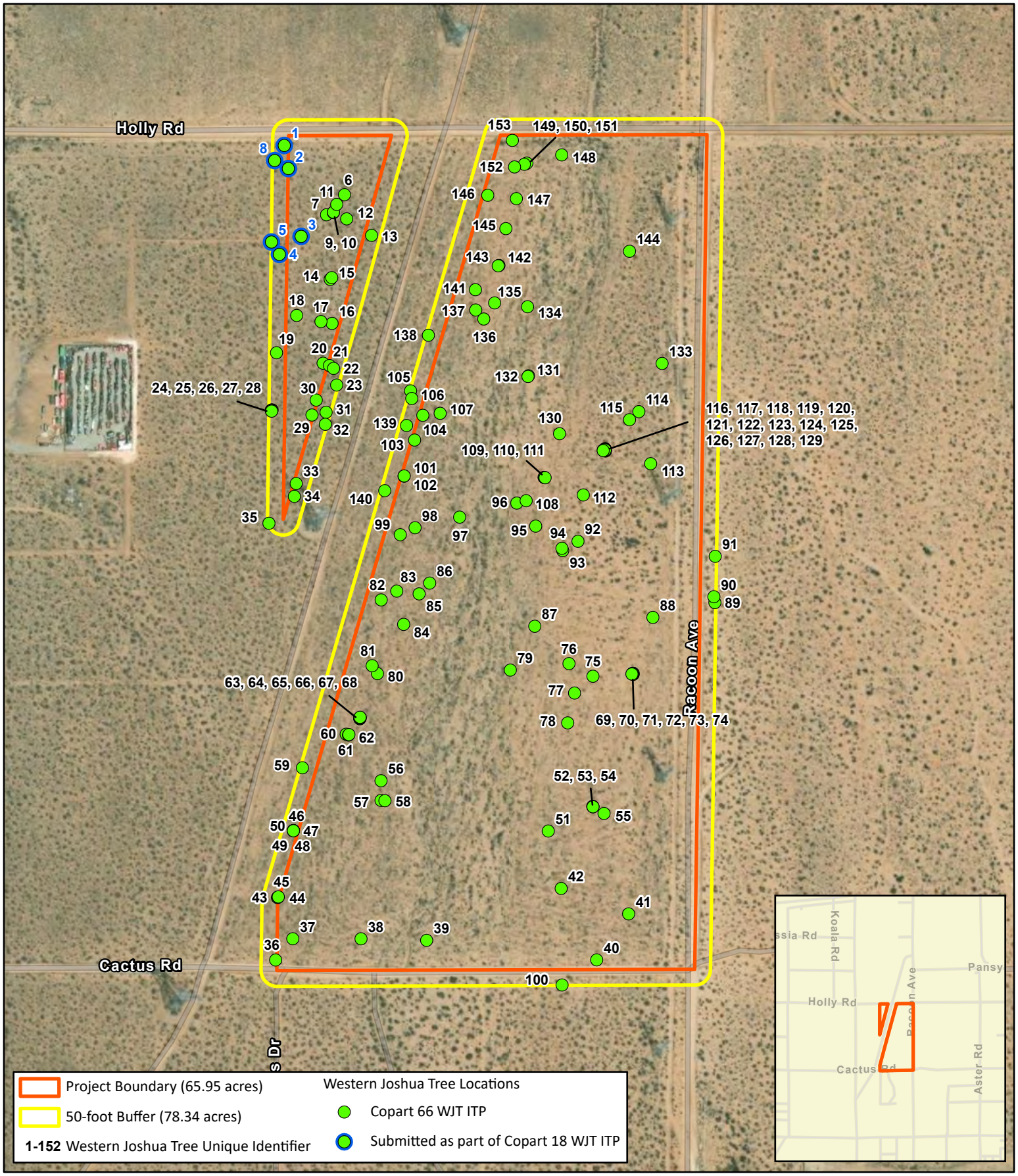
Aerial: ESRI World Imagery, San Bernardino County 2/5/2020
Soils: USDA-NRCS, accessed 12/5/2023
Map Date: 10/11/2023

Figure 8

Soils

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd



N 0 200 400 Feet

1" = 400 Feet

CASC Engineering and Consulting www.cascinc.com

Aerial: ESRI World Imagery, 3/6/2022
Map Date: 12/7/2023

Figure 9

Western Joshua Tree Census

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

3.5 REGULATORY SETTING

3.5.1 Federal Regulations

Federal Endangered Species Act (FESA) of 1973

As defined within the FESA of 1973, an endangered species is any animal or plant listed by regulation as being in danger of extinction throughout all, or a significant portion, of its geographical range. A threatened species is any animal or plant that is likely to become endangered within the foreseeable future throughout all or a significant portion of its geographical range. Without a special permit, federal law prohibits the "take" of any individuals or habitat of federally listed species. Under Section 9 of the FESA, "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" has been clarified to include "any act which actually kills or injures fish or wildlife and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife." Enforcement of FESA is administered by the USFWS.

Under the definition used by the FESA, "Critical Habitat" refers to specific areas within the geographical range of a species that were occupied at the time it was listed that contain the physical or biological features that are essential to the survival and eventual recovery of that species and that may require special management considerations or protection, regardless of whether the species is still extant in the area.

Migratory Bird Treaty Act (MBTA)

Pursuant to the MBTA (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The statute states:

"Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill...any migratory bird, any part, nest, or egg of any such bird...included in the terms of the [Migratory Bird] conventions…"

The Act covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered a "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six (6) families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons

and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protect all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

Executive Order 13112 – Invasive Species

On February 3, 1999, President William J. Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, which is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm, or harm to human health." Federal Highway Administration guidance issued August 10, 1999, directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project. Under the Executive Order, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

Section 404(b)(1) USACE

Section 404(b)(1) refers to a specific provision within the Clean Water Act in the United States. More specifically, Section 404 of the Clean Water Act addresses the regulation of discharges of dredged or fill material into waters of the United States, including wetlands. The U.S. Army Corps of Engineers administers the Section 404 program in conjunction with the Environmental Protection Agency.

3.5.2 State Regulations

California Environmental Quality Act (CEQA)

CEQA provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines “endangered” species as those whose survival and reproduction in the wild are in immediate jeopardy, while “rare” species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the State of California has its own CESA, enforced by the CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under the provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

California Fish and Game Code (CFGC)

Sections 3503, 3503.5, 3511, and 3513

The CDFW administers the CFGC. There are sections of the CFGC that are applicable to natural resource management. For example, Section 3503 makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey), such as hawks, eagles, and owls, are protected under Section 3503.5 which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a Project Site. Section 3511 lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected include the golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). In addition, Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Section 4150

Section 4150 of the CFGC protects nongame mammals, defined as any naturally occurring mammal in California that is not a game mammal, fully protected mammal, or fur-bearing

mammal. Non-game mammals, which includes bats and bat roosts, may not be taken or possessed except as provided by the CFGC or in accordance with applicable regulations.

Section 749.11, Title 14, California Code of Regulations

The proposed addition of Section 749.11, Title 14, California Code of Regulations creates a special-order allowing incidental take of western Joshua tree during CESA candidacy necessary to address this emergency.

On September 22, 2020, the Commission determined that listing may be warranted pursuant to FGC Section 2074.2. Western Joshua tree became a candidate species under CESA, effective upon publication of the notice of findings on October 9, 2020 (Office of Administrative Law notice number Z2020- 0924-01). Pursuant to FGC Section 2074.6, the Department will undertake a one-year status review. After the Commission receives the Department's status review, the Commission will make a final decision on listing. As of October 12, 2023, the final decision by the Commission has been postponed until February 2023.

Statutory Authority

Candidate species are protected from "take" under CESA pursuant to FGC Section 2085 during the remainder of the CESA listing. Under FGC Section 2084, CESA provides that the Commission may adopt regulations to authorize take of candidate species, based on the best available scientific information, when the take is otherwise consistent with CESA. As with all regulations, the Commission may adopt a regulation under Section 2084 on an emergency basis when it determines that a situation exists which threatens public health and safety or general welfare.

Another means to allow take of CESA candidate species is by Incidental Take Permit (ITP) pursuant to FGC Section 2081, subdivision (b), from the Department. An ITP allows a permittee to take CESA listed or candidate species if such taking is incidental to, and for the purpose of, carrying out an otherwise lawful activity, including for research or monitoring activities of such activity.

Native Plant Protection Act

Sections 1900–1913 of the CFGC were developed to preserve, protect, and enhance Rare and Endangered plants in the State of California. The act requires all State agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Desert Native Plants Act (CDNPA)

Division 23 of the California Food and Agriculture Code consists of the CDNPA. The CDNPA was developed to protect certain species of California desert native plants from unlawful harvesting on both public and privately-owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee.

Western Joshua Tree Conservation Act (WJTCA)

The WJTCA authorizes the CDFW to permit impacts to the western Joshua tree only if specific conditions are met, including the avoidance and minimization of impacts while allowing an option for payment of fees calculated to mitigate for the specific impacts by specific project.

Fees are deposited in the western Joshua Tree Mitigation Fund which requires the CDFW to deploy the Fund, in collaboration with local Tribes and others, to address threats to the western Joshua tree, including, but not limited to, acquiring, and conserving western Joshua tree habitat. The WJTCA requires CDFW to develop and implement a western Joshua tree conservation plan in collaboration with the Commission, governmental agencies, California Native America Tribes, and the public. It required CDFW to consult with California Native American Tribes, includes co-management principles in the conservation plan, provides for the relocation of western Joshua trees to tribal lands upon a request from a tribe, and supports the incorporation of traditional ecological knowledge into the conservation plan.

WJTCA authorizes the CDFW to delegate to a county or city the ability to approve the removal or trimming of dead or dying trees, subject to conditions, and an option to pay fees, CDFW oversight, and express CDFW authority to revoke any delegation. WJTCA includes annual reporting to the Commission about the effectiveness, performance, and success of the program, with specific deadlines for accountability and flexibility to increase fees as necessary pursuant to public, transparent processes.

Section 401 Certification State of California

A Section 401 certification refers to a provision of the Clean Water Act in the United States. Under Section 401 of the CWA, states have the authority to certify or deny certification for projects that may result in a discharge to navigable waters, such as wetlands or other water bodies. The purpose of Section 401 certification is to ensure that any federally permitted or licensed project complies with state water quality standards and other appropriate state regulations. Section 401 certifications are issued by the State of California or authorized tribes in the United States.

Section 1600 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The CDFW, through provisions of the California Fish and Game Code (Section 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least a periodic or intermittent flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW.

3.5.3 Local Policies and Ordinances

County of San Bernardino Countywide Plan

The Conservation Element of the County of San Bernardino Countywide Plan identifies measures to preserve the unique environmental features and natural resources of the desert region, including native wildlife and vegetation. One role of the Conservation Element involves the identification of a community's natural resources and the adoption of policies for their preservation, development, and wise use.

San Bernardino County Countywide Plan Policy Natural Resources (NR)-5.1 Coordinated Habitat Planning supports landscape scale habitat conservation planning and coordinate with public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions, and for land development and infrastructure permitting.

NR-5.6 Mitigation Banking supports the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. The County does require public and private conservation lands or mitigation banks to ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.

City of Adelanto

City of Adelanto participates in the County of San Bernardino Countywide Plan and includes policies to protect natural resources that include habitat and sensitive species. Countywide Plan includes policies that are designed to preserve native habitat and sensitive biological resources by designating open space areas, preserving drainages and washes in their natural state to the extent feasible, and developing a Habitat Conservation Plan to meet local needs.

West Mojave Plan Habitat Conservation Plan and California Desert Conservation Area Plan

The West Mojave Plan is a habitat conservation plan and federal land use plan amendment that presents a comprehensive strategy to conserve and protect the desert tortoise, the Mohave ground squirrel and nearly 100 other sensitive plants and animals and the natural communities of

which they are a part and provides a streamlined program for complying with the requirements of the California and federal Endangered Species Acts. The West Mojave Plan is being prepared through the collaborative effort of cities, counties, State and federal agencies having jurisdiction over lands within the region. The Plan will allow streamlined project permitting at the local level, equitable sharing of costs among participants, and shared stewardship of biotic resources.

Section 4 Results

The following discusses the potential for special-status plant and wildlife species and special-status vegetation communities to occur within the Survey Area. The CNDDB and CNPS Online Inventory were queried for reported locations of special-status plant and wildlife species as well as special-status natural vegetation communities. Special-status plant and wildlife species were evaluated for their potential to occur within the Survey Area based on habitat requirements, availability and quality of suitable habitat, and known distributions. Utilizing CNDDB, USGS 7.5-minute *Adelanto* Quadrangle was queried to provide a list of species known to occur within the entirety of the quadrangle. This summary report of special-status species is included in Appendix E, CNDDB Report Summary Table. This list was further refined to a five (5) mile radius around the Survey Area after the field surveys and consideration of current site conditions (Figure 5). An evaluation of the potential for each species identified in the database records search to occur within the Survey Area is presented in the following section.

4.1 SPECIAL-STATUS SPECIES

The literature search identified two (2) special-status plant species and no special-status vegetation communities were reported within a five (5) mile radius of the Survey Area. However, six (6) special-status wildlife were reported to occur within a five (5) mile radius (Figure 5). The likelihood of occurrence was based on the following definitions:

- **Present**: the species was observed or detected within the Survey Area during the field survey.
- **High**: Recent occurrence records indicate that the species has been known to occur on or within one (1) mile of the Survey Area and the Survey Area is within the normal or expected range of this species. Intact, suitable habitat preferred by this species occurs within the Survey Area and/or there is viable landscape connectivity to a local known extant population(s) or sighting(s).
- **Moderate**: Recent occurrence records indicate that the species has been known to occur within one (1) mile of the Survey Area and the Survey Area is within the normal expected range of this species. There is suitable habitat within the Survey Area, but the site is ecologically isolated from any local known extant populations or sightings.
- **Low**: Recent occurrence records indicate that the species has been known to occur within 5 miles of the Survey Area, but the Survey Area is outside of the normal expected range of the species and/or there is poor quality or marginal habitat within the Survey Area.
- **Not Expected**: There are no occurrence records of the species occurring within 5 miles of the Survey Area, there is no suitable habitat within the Survey Area, and/or the Survey Area is outside of the normal expected range for the species.
- **Absent**: The species has been determined to conclusively be absent from the Survey Area.

4.1.1 Special-Status Plant Species

Two (2) special-status plant species were identified as having potential to occur within the region of the Survey Area. The results below are based on the field survey and a review of specific soil and vegetation associations, occurrence records, known distribution, elevational ranges, and habitat associations.

Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum)* California Rare Plant Rank (CRPR) 2B.2 (rare, threatened, or endangered in California; common elsewhere) was identified in the literature search as occurring within a 5-mile radius of the Project Site. Sagebrush loeflingia is an annual herb that is native to California that prefers dunes habitat and sagebrush scrub and creosote scrub communities. It blooms during April and May at elevations ranging from 4,625 to 4,920 feet. Recent occurrence records indicate that the species has been known to occur within 5 miles of the Survey Area (Figure 5), but the Survey Area is outside of the normal expected elevational range of the species given the Project Site is 3,017 feet amsl and the Project Site lacks the scrub communities where this species is associated. Focused surveys for this species were not conducted during the spring blooming period. However, during the April site visit, this species was not observed at the Project Site. This species is **not expected to occur** on the Project Site.

Western Joshua tree (*Yucca brevifolia*) (CDFW Candidate Threatened) was observed within the Project Site and throughout the Survey Area. This species is recorded as **present** on the Project Site. Western Joshua tree (WJT) inventory was conducted on November 14 and 17, 2023. Data was collected in accordance with the guidelines presented in the WJTCA for the purpose of completing an Incidental Take Permit (ITP) application. The location of all WJTs were recorded using global positioning system (GPS) (Figure 9, Joshua Tree Locations). Data collected on each WJT is presented under separate cover in the **ITP Application for Copart 66, December 2023**.

Western Joshua tree (WJT) was inventoried and organized into three (3) size classes in accordance with the Western Joshua Tree Conservation Act (WJTCA). WJT on the Project Site and within a fifty-foot (50) buffer (as required by the WJTCA) were recorded. Only those WJT within the Project Site are presented below:

A total of one-hundred fifty-two (152) WJT were recorded on the Project Site.

- **Size Class A** are trees categorized as less than one meter in height.
  Forty-two (42) live WJTs recorded on the Project Site.
- **Size Class B** are trees between one (1) and five (5) meters in height.
  Sixty-eight (68) live and fifteen (15) dead WJTs recorded on the Project Site.
- **Size Class C** are trees more than five (5) meters in height.
  Twenty-one (21) live and six (6) dead WJTs recorded on the Project Site.
  Refer to Figure 9, Joshua Tree Locations.

4.1.2 Special-Status Wildlife Species

Six (6) special-status wildlife species have the potential to occur within the Survey Area. The results below are based on the field survey and a review of specific habitat preferences, occurrence records, known distributions, elevational ranges, and habitat associations. The following species are presented in the order in which they correspond to their mitigation measures presented in Section 5 Conclusion and Recommendations.

Western Burrowing Owl (*Athene cunicularia*, SSC, Locally Significant Species)
Western burrowing owl is considered locally significant within the County of San Bernardino and the City of Adelanto. This small, long-legged owl prefers open grassy habitats, fallow agricultural fields, and disturbed habitats with sparse vegetation and interstitial spaces for line of sight. This species is typically found on the ground or perched on low fence posts or rocks. Western burrowing owls are active during the day and night when this species hunts mainly for insects and small mammals. This species will nest in burrows, often dug by ground squirrels or tortoise. The Project Site is within the historical range for this species and sightings have been recorded per the CNDDB within 5-miles of the Project Site (Figure 5). Casc's biologists conducted four site visits to assess the site for burrows. Transects were walked to 100% visually assess the entire area and note the size and shape of burrows noted on site. At the time of the site assessments, there were no burrows of appropriate size or shape to suggest that western burrowing owl was currently inhabiting the Project Site. Western burrowing owl is highly mobile and habitat conditions within the Survey Area are suitable to support this species. Based on the results of the field survey, and a review of specific habitat preferences, occurrence records and known distributions it was determined that this species has a **high likelihood of occurrence** within the Survey Area.

Mohave Ground Squirrel (*Xerospermophilus mohavensis*, ST)
Mohave ground squirrel eats a wide variety of green vegetation, seeds, and fruits (Zembal and Gall 1980). Forages on the ground or in shrubs and Joshua trees. Fruiting Joshua trees may attract concentrations of ground squirrels. Restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo counties. This species is rare throughout its range, populations in the western Antelope Valley (west of State Route 14) appear to be extirpated. Optimal habitats are open desert scrub, alkali desert scrub, Joshua tree, and annual grasslands. Has been found from 1,800 - 5,000 feet amsl elevation. (Helgen et al. 2009). Several other common squirrels occur within the range of Mojave ground squirrel such as antelope ground squirrel (*Ammospermophilus leucurus),* round-tailed ground squirrel (*Xerospermophilus tereticaudus*) and the California ground squirrel (*Spermophilus beecheyi*). Per the CNDDB, this species was recorded within half a mile from the Project Site (Figure 5). While Mohave ground squirrel and the other squirrel species mentioned above were not observed on the Project Site during the site assessments, the site does have suitable conditions to support this species for nesting and foraging. Based on the results of the field survey, and a review of specific habitat preferences,

occurrence records, known distributions, and elevation ranges, it was determined that this species has a **high likelihood of occurrence** within the Survey Area.

Desert Tortoise (*Gopherus agassizii*, Federally Threatened/ST)

Desert tortoise is a medium-sized tortoise that occupies desert scrub habitats in desert valleys and on bajadas in the Mojave and Colorado Deserts in California, Nevada, Arizona, and Utah in the United States. The species is an adept burrower, and retreats to cover sites, such as self-excavated burrows, caliche caves, and rockshelters, where it spends more than 95% of its time to avoid harsh desert conditions. Shrubs, especially creosote bushes, are important habitat for Agassiz's desert tortoises, and are used as shade resources to avoid the hot desert sun (Desert Tortoise Council, accessed December 7, 2023). The Project Site is within the historical range for this species and has been recorded per the CNDDB within 5-miles of the Project Site (Figure 5). Casc's biologists conducted four site visits to assess the site for burrows. Transects were walked at 15-feet apart to 100% visually assess the entire area and note the size and shape of burrows on site. At the time of the site assessments, there were no burrows of appropriate size or shape to suggest that desert tortoise was currently inhabiting the Project Site. This species is mobile and with unobstructed open space areas near the Project Site it is reasonable to assume that this species could occupy the site or use it for foraging or overland travel. Focused protocol level surveys for desert tortoise have not been conducted to date. Based on the results of the field surveys, a review of specific habitat preferences, occurrence records, known distributions, and elevational ranges, it was determined that this species has a **low likelihood of occurrence** within the Survey Area.

Loggerhead Shrike (*Lanius ludovicianus, SSC*)[2]

Loggerhead shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, and golf courses. Loggerhead shrike are often seen along mowed roadsides with access to fence lines and utility poles and a common breeding resident in the deserts of southern California. Breeding populations of the loggerhead shrike are listed as a Species of Special Concern (SSC) by the CDFW (All About Birds, accessed December 5, 2023). Per the CNDDB, this species was recorded as occurring within 5-miles of the Project Site (Figure 5). Loggerhead shrike was not observed on the Project Site during the site assessments, but the site does have potential to support this species for nesting and foraging. This species is considered to have a **low likelihood of occurrence** as there is suitable habitat on site and it is within the normal expected range for this species.

[2] SSC: Species of Special Concern is a State of California designation which applies to animals not listed under the federal Endangered Species Act or the California Endangered Species Act, but which nonetheless (a) are declining at a rate that could result in listing, or (b) historically occurred in low numbers and known threats to their persistence currently exist.

[3] ST: State Threatened. Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range

Le Conte's Thrasher (*Toxostoma lecontei,* SSC)

Le Conte's thrashers live in low, sandy, open deserts that are home to few other bird species. Over most of their range, saltbush, shadscale, cholla cactus, creosote, yucca, mesquite, and ocotillo are common plants, but they are usually sparsely distributed in these mostly flat or rolling landscapes. The will discretely nest within cholla cactus. (All About Birds, accessed December 7, 2023). Per the CNDDB, this species was recorded within 5-miles of the Project Site (Figure 5). Le Conte's thrasher was not observed on the Project Site during the site assessments, but the site does have potential to support this species for nesting and foraging. This species is considered to have a **moderate likelihood of occurrence** as there is suitable habitat on site and it is within the normal expected range for this species.

Swainson's Hawk (*Buteo swainsonii*, ST)[3]

Swainson's hawks favor open habitats for foraging such as agricultural fields, grassland, and pastures. Per the CNDDB, this species was recorded as occurring within 5-miles of the Project Site (Figure 5). Swainson's hawk was not observed on the Project Site during the site assessments. This species is considered to have a **low likelihood of occurrence** for both foraging and nesting as the habitat on site is not preferred but is within the normal expected range.

4.2 NESTING BIRDS AND WILDIFE MOVEMENT

Vegetation on site is low growing but the presence of WJT provides resources and cover for birds common to the high desert region such as Anna's hummingbird (*Calypte anna*), and house finch (*Carpodacus mexicanus*), cactus wren (*Campylorhynchus brumeicapillus)*, American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and turkey vulture (*Cathartes aura*). There is also an opportunity for common ground nesting species to nest on site such as mourning dove (*Zenaida macroura)*, killdeer *(Charadrius vociferus),* and horned lark (*Eremophila alpestris*). Mammals such as black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*), may forage on site and travel across the Project Site to access adjacent properties.

Two locations of burrow complexes were observed on the Project Site that appeared to be old desert kit fox (*Vulpes macrotis arsipus*). These burrows had relatively large openings and connecting exits. The burrows appeared to have been abandoned as was evidenced by webs and other debris covering the openings. The aprons of the burrows lacked any tracks, scat or other sign that would indicate recent occupation. The locations of these burrows were recorded for future reference if needed during preconstruction surveys.

4.3 SPECIAL-STATUS VEGETATION COMMUNITIES

Dominant species on the Project Site consist of creosote bush, white bursage, and cheesebrush. WJT is present but not as a dominant feature on the Project Site. If the abundance WJT was greater than 1%, then the vegetation community would be characterized as Joshua tree

Woodland. Casc's assessment was that WJT did not equal or exceed the actual or relative abundance to meet Joshua Tree Woodland on the Project Site. Therefore, it was concluded that the vegetation community meets the classification of Larrea tridentata-Ambrosia dumosa Shrubland Alliance (creosote bush–white bursage scrub) from the Manual of California Vegetation (CNPS). This corresponds to Mojave creosote bush scrub vegetation community as identified by Holland. Creosote bush-white bursage scrub is not classified as a special-status vegetation community.

4.4 REGIONAL CONNECTIVITY

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. The City of Adelanto identifies potential Wildlife Corridors in their Open Space Element and Conservation section of the General Plan (Adelanto North 2035 Comprehensive Sustainable Plan). The Survey Area is not identified within the Adelanto North 2035 Comprehensive Sustainable Plan as a Wildlife Corridor or Linkage.

4.5 CRITICAL HABITAT

USFWS-designated critical habitat (proposed or final) is not within the Survey Area (Figure 4). Designated critical habitat is greater than 5-miles from the Project Site, therefore, no critical habitat will be impacted by Project development.

4.6 JURISDICTIONAL FEATURES ANALYSIS

The NWI and NHD maps identified a jursidictional feature on the Project Site (Figures 6 and 7 respectively). Casc's biologists performed a formal jursidictional delineation during December 2023. The results of that study can be reviewed in detail in the Jurisdictional Delineation Report for Valfair/Copart 66 Project (December 2023). A brief summation of findings is presented below.

Non-Wetland Features

An unnamed ephemeral drainage feature bisects the Project Site (Figure 6). Casc's senior biologist Dennis Peterson performed a jursidictional delineation on this feature the results of which can be referenced in detail in the Jurisdictional Delineation Report for Valfair/Copart 66 Project (December 2023).

Desktop review of available literature identified one aquatic feature on the Project Site. This feature occurred solely within APN 3128-34-104 and bisects the parcel from Cactus Road to Holly Road. The feature is mapped within the NWI and described as an intermittent riverine streambed with surface water occurring without detectable seasonal periodicity. This can result in weeks,

months, or years between occurrences of observable surface water. The feature is also mapped within the NHD as an ephemeral stream flowing south to north from Cactus Road to Holly Road.

The field survey revealed an ephemeral stream roughly aligning with NWI and NHD maps. The historical flow of the stream has been altered by both Cactus and Holly Road construction in the past. Currently water flows onto the Project Site from Cactus Road. Riverine features are observable where water enters the site from Cactus Road and consists of a defined bed and bank with an observable ordinary high-water mark. These riverine features continue in a northerly direction and teminate at the northern end of the Project where they dissipate nearer to Holly Road.

These non-wetland waters are unlikely to be determined jurisdictional by the USACE but may still be considered jurisdictional by the RWQCB. There are no obvious signs of riparian vegetation or ponding, however there is an observable increase in the abundance of cheesebrush and rubber rabbitbrush and decrease in abundance of white bursage and western Joshua tree. This may be more due to soil disruption by water flow and less to do with increase in water supply. These results would likely limit CDFW jurisdictional concern to the top of bank in the riverine feature.

Wetland Features

There are no wetland features within the Project Site or Survey Area.

Section 5 Conclusion and Recommendations

CEQA requires Project proponents to analyze and disclose potential environmental impacts associated with Project development. Any potentially significant impact must be mitigated to the extent feasible. CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a project that the agency will carry out, fund, or approve. Any potentially significant impact must be mitigated to the extent feasible. Impacts to special-status species designated as endangered, threatened, rare, or a candidate species would require disclosure under CEQA. Impacts to Species of Special Concern are not considered significant under CEQA and warrant no legal protection but may simply require CEQA disclosure.

The following are conclusions and recommendations intended to provide best management practices for Project development, provide guidance for local, State, and federal guidelines, protect natural resources, and mitigate all impacts to less than significant.

5.1 SPECIAL STATUS PLANT AND VEGETATION COMMUNITIES

Based on the results of the site assesments and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined one (1) special-status plant, WJT is **present** and special-status vegetation communities are **absent** from the Project Site. No further results or findings regarding special-status vegetation communities will be discussed in this document. The following avoidance and minimization measure is recommended to reduce potential impacts and lessen mitigation obligation for special-status WJT to **less than significant**.

Mitigation can consist of avoidance, removal, on-site relocation, off-site relocation, and purchase of credits in a CDFW approved mitigation bank. In the instance of relocation of western Joshua tree, the Project proponent will be responsible for preparation of long-term maintenance, monitoring, watering, and weeding plan to ensure the health of the transplanted tree, the placement of fencing and signage around transplanted trees, and if requested by CDFW, an endowment to maintain the relocated trees. Purchase of credits in a CDFW approved mitigation bank can be an option once bank approval is finalized.

BIO-1: Incidental Take Permit from CDFW

During fall 2023, CDFW approved the WJTCA to assist land owners in expediting the ITP process. Application and supporting documentation shall be submitted to CDFW for review and approval for removal of WJTs on the Project Site. An ITP establishes a performance standard requiring that the impacts be “minimized and fully mitigated” with “measures that are roughly proportional in extent to the impact of the authorized taking of the species (Fish & G. Code § 2081(b); Cal. Code Regs., tit. 14, §§ 783.2-783.8). Therefore, additional mitigation measures, such as the

purchase of credits from an approved conservation or mitigation bank, land acquisition, or entry into a conservation easement, will be determined in consultation with CDFW to meet ITP requirements. Because the western Joshua tree was designated as a candidate species in October 2020 and is still subject to a status review by CDFW, it is impractical to determine the specific details of mitigation, beyond compliance with the ITP. A completed application requires an approved CEQA document to accompany the ITP application. CDFW requires the CEQA document to have a state clearing house number, show proof of filing fees, and that the document has been circulated. CDFW will then review the ITP and CEQA document and make a determination of mitigation.

BIO-2: California Desert Native Plants Act Protection and Relocation Plan

If mitigation measures of the ITP (BIO-1) include preservation in place through avoidance or relocation, then a *Desert Native Plant Protection and Relocation Plan* (Plan) for those trees proposed for relocation or preservation shall be composed which will provide detailed specifications for the proposed treatment, avoidance, or relocation of all western Joshua trees and those desert species included under the CDNPA. Other native desert species included for protection under CDNPA includes smoke trees (*Cotinus* sp.), species in the Agavacea family, mesquite (*Prosopis* sp.), and large creosote bushes (*Larrea* sp.). Further, the CDNPA will provide measures to meet the requirements of CEQA.

5.2 SPECIAL-STATUS WILDLIFE SPECIES

The following avoidance and minimization measures are recommended to reduce potential impacts and lessen mitigation obligation for special-status wildlife species to **less than significant**. Loggerhead shrike, Le Conte's thrasher and Swainson's hawk will be addressed below in Section 5.3 Special-Status Birds and Nesting Birds.

5.2.1 Avoidance and Minimization Measures

5.2.1.1 Western Burrowing Owl

To ensure there are no impacts to burrrowing owl, it is recommended that a one-day site visit by a qualified biologist be performed within 14-30 days of project construction or ground breaking activities. If burrowing owl are observed at this time CDFW will be contacted to collaborate on methods to remove or discourage owls from occupying the site. The following avoidance and minimization measures are recommended to reduce potential impacts and lessen mitigation obligation for special-status wildlife species to **less than significant**.

BIO-3: Pre-Construction Western Burrowing Owl Clearance Surveys

In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), two (2) pre-construction clearance surveys should be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. Once surveys are completed, the qualified biologist shall prepare a final report documenting surveys and findings. If no burrowing owls or occupied burrows are detected, Project construction activities may begin. If an occupied burrow is found within the Project Site during pre-construction clearance surveys, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to the County, which may consult with CDFW for review, prior to initiating Project construction activities.

BIO-4: Passive and Active Relocation of Western Burrowing Owls

If western burrowing owls are observed on the Project Site during preconstruction surveys, CDFW shall be immediately notified to determine if avoidance of the nest is appropriate until the nest is vacated or to gain concurrence from CDFW on active or passive relocation actions. All passive or relocation activities shall be in concurrence with CDFW guidelines (Staff Report on Burrowing Owl Mitigation 2012).

If burrowing owls are present and nesting on-site the following steps shall be necessary to reduce impacts to less than significant. These steps may be augmented by recommendations from CDFW:

a. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that: (1) owls have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
b. A qualified biologist shall exclude all owls from active burrows using one-way doors. Concurrently, all inactive burrows and other sources of secondary refuge for burrowing owls shall be collapsed and removed from the site.
c. Following and 24 to 48-hour observation period, all vacated burrows shall be collapsed.
d. A qualified biologist shall conduct a post-exclusion survey confirming the absence of burrowing owls on the Project Site. Should newly occupied burrows be discovered on the Project Site the exclusion activities shall be repeated.

5.2.1.2 Mohave Ground Squirrel

The following avoidance and minimization measures are recommended to reduce potential impacts and lessen mitigation obligation for special-status wildlife species to **less than significant**.

BIO-5: Pre-Construction Survey for Mohave Ground Squirrel Survey

In accordance with the *California Department of Fish and Game Mohave Ground Squirrel Survey Guidelines* (July 2010) a qualified biologist with a Memorandum of Understanding (MOU) from CDFW shall perform a pre-construction one-day visual site assessment to determine the potential for Mohave ground squirrel to occur on the Project Site and if trapping surveys are warranted. The pre-construction survey can be performed **any time of year**, however, the **optimal time** to perform a visual survey to determine activity and habitat quality is from **15 March through 15 April**.

Prior to visiting the Project Site, the qualified biologist will perform a literature search for all recent and historical records within the region of the Project Site. Once on site, if the biologist observes conditions that are conducive to supporting Mohave ground squirrel, a trapping session may be necessary to determine presence/absence (See **BIO-6** below). If the qualified biologist observes Mohave ground squirrel during the pre-construction visual survey, the Project Site will be considered "occupied" and notification will be sent to CDFW. Mitigation for impacts to Mohave ground squirrel will then be negotiated with CDFW.

BIO-6: Mohave Ground Squirrel Presence/Absence Trapping Surveys

Mohave ground squirrel trapping shall be authorized by a MOU or Letter Permit issued by the Wildlife Branch of the Department, or by another permit as determined by the Department and shall be undertaken only by a qualified biologist. A qualified biologist is a biologist who has demonstrated pertinent field experience in capturing and handling ground squirrels or other small mammals in desert/arid communities and who has been permitted by the Department to work without supervision. Each biologist setting traps, opening traps containing captured animals, or handling captured animals must be named in the MOU or Letter Permit as an authorized person, whether qualified or not to work without supervision.

Visual surveys to determine Mohave ground squirrel activity and habitat quality shall be period of 15 March through 15 April. All potential habitat on a Project Site shall be visually surveyed during daylight hours by a biologist who can readily

identify the Mohave ground squirrel and the white-tailed antelope squirrel (*Ammospermophilus leucurus*).

One sampling grid consisting of 100 Sherman livetraps (or equivalent; the minimum length of any trap is 12 inches) shall be established for each 80 acres, or fraction thereof, of potential Mohave ground squirrel habitat on the Project Site. The traps shall be arranged in a 10 x 10 grid, with 35-meter spacing between traps.

Each sampling grid shall be trapped for a minimum of five consecutive days unless a Mohave ground squirrel is captured before the end of the five-day term on the grid or on another grid on the Project Site. If no Mohave ground squirrel is captured on a sampling grid on the Project Site in the first five-consecutive-day term, each sampling grid shall be sampled for a SECOND five-consecutive-day term. Trapping may be stopped before the end of the second term if a Mohave ground squirrel is captured on any sampling grid on the Project Site. If no Mohave ground squirrel is captured during the second five-consecutive-day term, each sampling grid shall be sampled for a THIRD five-consecutive-day term.

The FIRST trapping term shall begin and be completed in the period of 15 March through 30 April. If a SECOND term is required, it shall begin at least two weeks after the end of the first term, but shall begin no earlier than 01 May, and shall be completed by 31 May. If a THIRD term is required, it shall begin at least two weeks after the end of the second term, but shall begin no earlier than 15 June, and shall be completed by 15 July. All trapping shall be conducted during appropriate weather conditions, avoiding periods of high wind, precipitation, and low temperatures (less than 50 degrees Fahrenheit).

5.2.1.3 Desert Tortoise

The following avoidance and minimization measures are recommended to reduce potential impacts and lessen mitigation obligation for special-status wildlife species to **less than significant**.

BIO-7: Desert Tortoise Presence/Absence Survey

A resource agency approved biologist will conduct desert tortoise presence/absence protocol level surveys by walking transects no greater than 15-feet in width over the entire Project Site to gain 100% visual access. An assessment of a buffer zone is also required to complete the presence/absence survey. If desert tortoise are observed on the Project Site or within the buffer area the resource agencies will be contacted immediately for further direction.

A final Desert Tortoise Presence/Absence Report will be submitted to the Client, CDFW, and USFWS. The report will discuss the survey methodology, transect width, duration, conditions, and results of the survey. GPS will be used to record potential or occupied burrows. Representative site photographs with a photo point location map will also be included in the final report.

5.3 SPECIAL-STATUS BIRDS AND NESTING BIRDS

Potential impacts to loggerhead shrike, Le Conte's thrasher, Swainson's hawk and other bird species common to the Project region can be mitigated to **less than significant** with the following measure.

5.3.1 Avoidance and Minimization Measures

Pursuant to the MBTA (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The following avoidance and minimization measure is recommended to reduce potential impacts to nesting birds to **less than significant**.

Impacts to special-status species designated as endangered, threatened, rare, or a candidate species would require disclosure under CEQA. Impacts to SSC species are not considered significant under CEQA and warrant no legal protection but may simply require CEQA disclosure.

BIO-8: Nesting Bird Preconstruction Surveys

If it is not feasible to avoid the nesting bird season (typically January through July for raptors and February through August for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or directly adjacent to the Project Site. If active nests are located, the extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, the nesting bird survey shall occur no earlier than 30 days prior to the commencement of construction.

In the event active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

5.4 REGIONAL CONNECTIVITY AND WILDLIFE MOVEMENT

The Project Site is surrounded by undeveloped land on all sides. Further, the Project Site is not identified as a wildlife corridor by the County of San Bernardino or the City of Adelanto. Therefore, **no impacts** to regional connectivity or wildlife corridors will occur due to Project development.

5.5 CRITICAL HABITAT

There is no USFWS-designated critical habitat mapped within the Survey Area. Therefore, **no** impacts to critical habitat are expected to occur as a result of Project development.

5.6 JURISDICTIONAL FEATURES ANALYSIS

An unnamed ephemeral drainage feature bisects the Project Site. Casc's senior delineator performed a jurisdictional delineation during December 2023. Results of the delineation determined the feature is a non-wetland, thus the drainage is unlikely to be considered jurisdictional by the United States Army Corps of Engineers (USACE) but may still be considered jurisdictional by the California Regional Water Quality Control Board (RWQCB) and CDFW. There were no defined wetland features on the Project Site.

Impacts to jurisdictional waters would require permit authorizations from the USACE via a Section 404(b)(1) Permit Program, from the CDFW via a 1602 Streambed Alteration Agreement, and from the RWQCB via a 401 State Water Quality Certification. Compensatory mitigation for impacts to jurisdictional waters would be addressed in a mitigation plan to be submitted for approval with the permit application packages. Authorized impacts to jurisdictional waters would require in-kind mitigation through habitat creation, enhancement, or preservation to achieve a no-net-loss of jurisdictional waters.

5.7 CONCLUSION

To the best of our knowledge, this Report is intended to identify additional needs relating to field studies and possible constraints associated with Project development. All figures and species lists were created specifically for this Project and reflect site conditions at the time of the site assessment.

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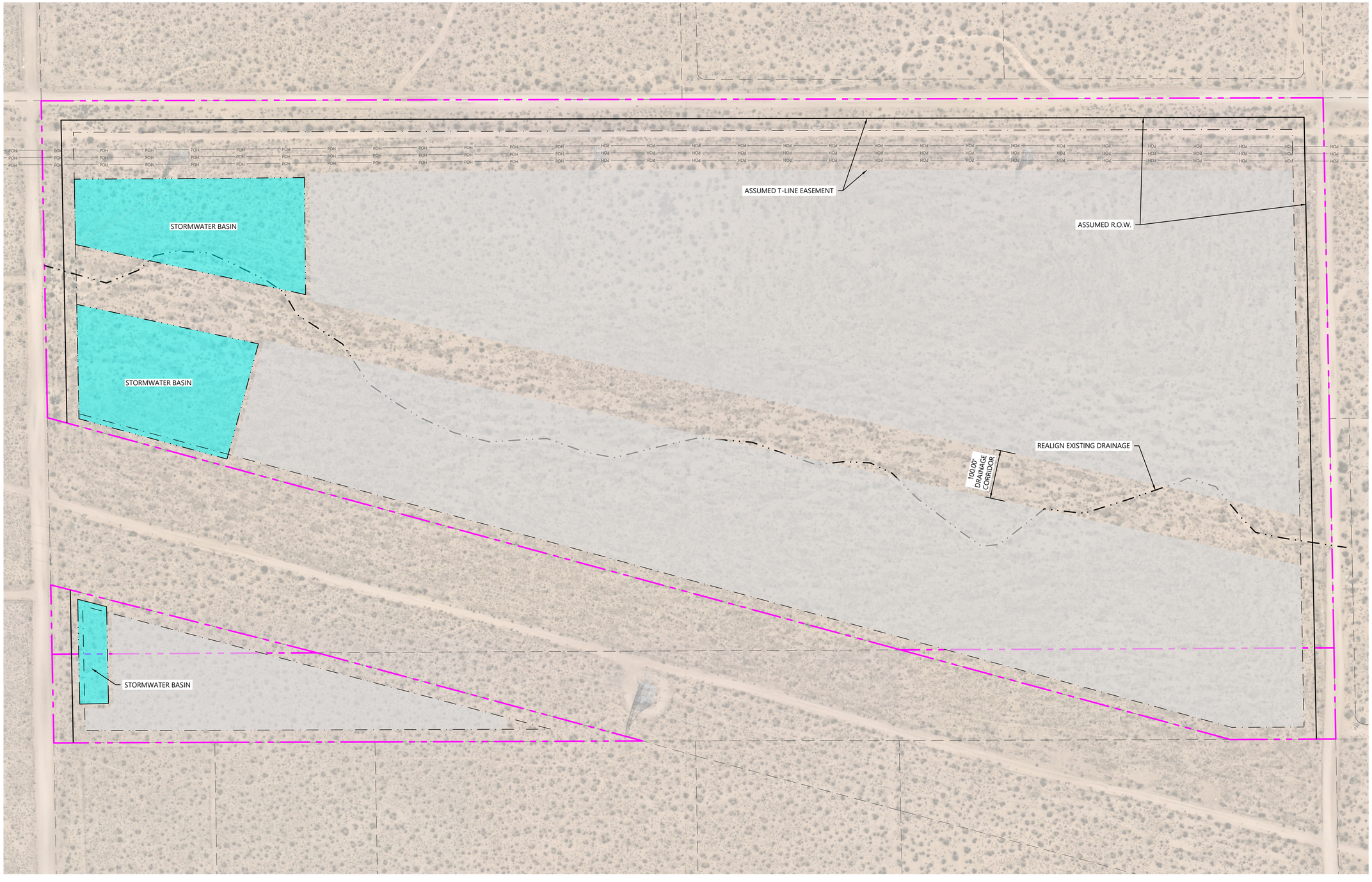
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Appendix A

Conceptual Plans

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NOT FOR CONSTRUCTION

N:\0035770.00\DWG\CONCEPTS & EXHIBITS\0035770SK01.DWG

ADELANTO, CA 66 AC

DESIGNED: .
CHECKED: .
DRAWN: .
HORIZONTAL SCALE: 100'
VERTICAL SCALE: 20' OR 10'

INITIAL ISSUE: 03/08/22
REVISIONS:
1 . .
2 . .
3 . .
4 . .
5 . .

PREPARED FOR: Copart

. .
DATE: 03/08/22 LICENSE NO. .

ADELANTO, CA 66 AC
ADELANTO, CA

Westwood
Phone (320) 253-9495 3701 12th Street North, Suite 206
Fax (320) 358-2001 St. Cloud, MN 56303
Toll Free (800) 270-9495 westwoodps.com
Westwood Professional Services, Inc.

SITE CONCEPT PLAN

PROJECT NUMBER: 0035770.00

SHEET NUMBER: 1 OF 1
DATE: 03/08/22

Appendix B

Representative Site Photographs



Photo Point 1. Looking Northeast at south end of drainage that bisects the Project Site.

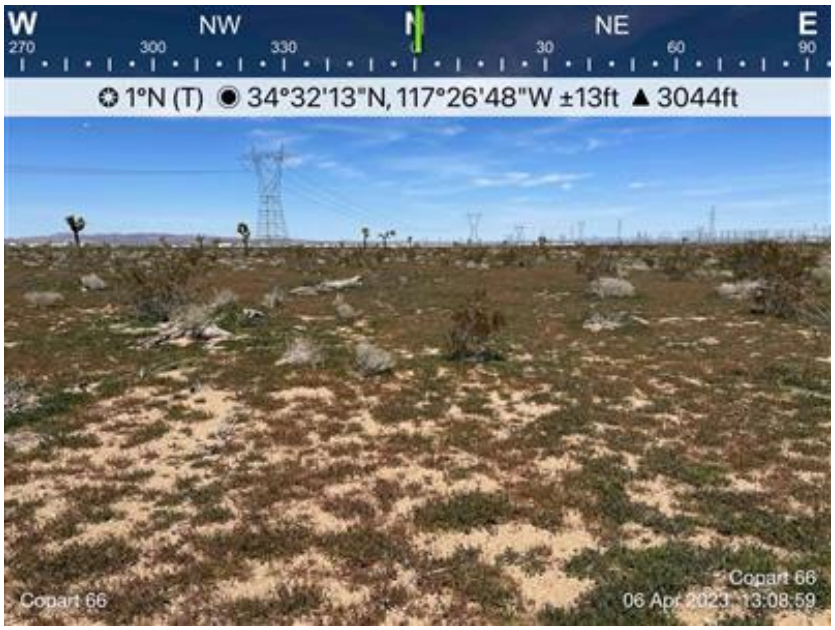


Photo Point 2. Looking North across the Project Site.

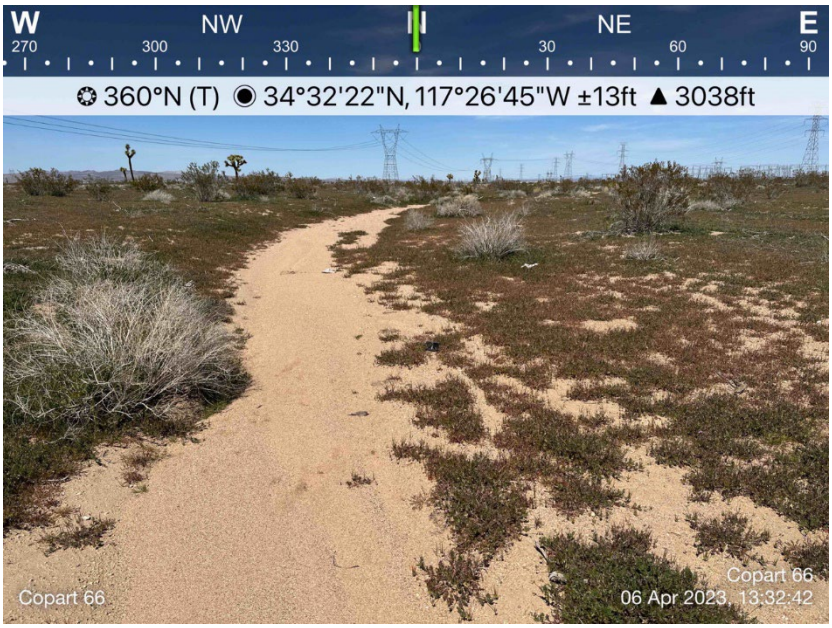


Photo Point 3. Looking North at drainage that bisects the Project Site..

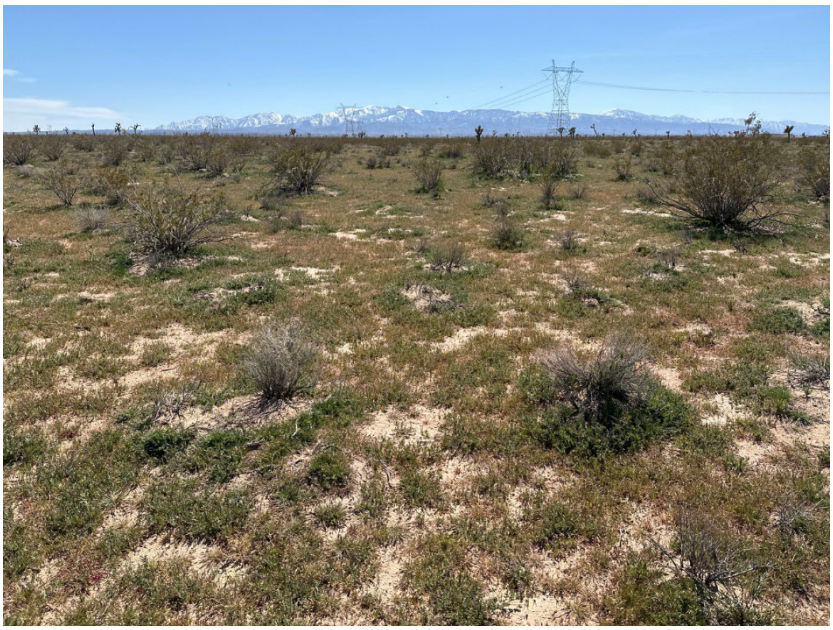


Photo Point 4. Looking South across the Project Site.



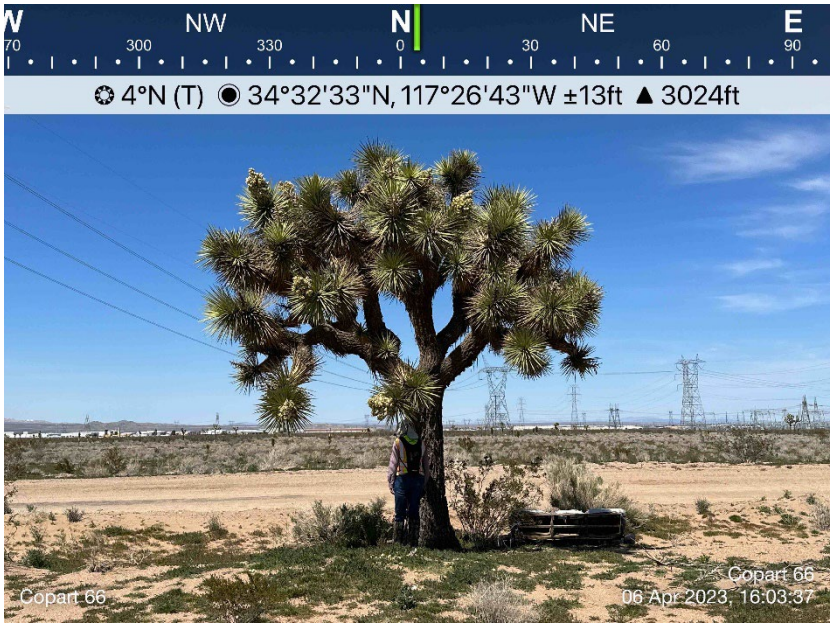
Photo Point 5. Looking Southeast across Project Site.



Photo Point 6. Looking North across the Project Site.



Photo Point 7. Looking North. Notice how fallen trees can resprout.



Photograph 8. Looking Southeast at Joshua tree adjacent to Holly Road. It is recommended to preserve and protect this tree in place

Appendix C

Plant Compendia

APPENDIX C

Plant Compendia

The following vascular plant species were observed by CASC at the **Copart 66 Project Site in Adelanto, California** on April 6, 2023, November 8, 14, and 17, 2023.

*Indicates introduced nonnative species

SPECIES/SCIENTIFIC NAME	FAMILY/COMMON NAME
ANGIOSPERMAE	***FLOWERING PLANTS***
ASPARAGACEAE	*ASPARAGUS FAMILY*
Dichelostemma capitatum	blue dicks
Yucca brevifolia	Joshua tree
ASTERACEAE (COMPOSITAE)	*SUNFLOWER FAMILY*
Ambrosia dumosa	white bursage
Chaenactis fremontii	Fremont's pincushion
Ericameria nauseosa	common rabbitbush
Palafoxia arida	desert palafox
Lasthenia californica	Baker's goldfields
Malacothrix glabrata	smooth desert dandelions
Lactuca tatarica	blue lettuce
BORAGINACEAE	*BORAGE FAMILY*
Amsinckia tessellata	bristly fiddleneck
BRASSICACEAE	*MUSTARD FAMILY*
Descurainia pinnata	western tansy mustard
*Sisymbrium altissimum**	Jim Hill mustard
Caulanthus lasiophyllus	California mustard
*Sisymbrium irio**	London rocket
CACTACEAE	*CACTUS FAMILY*
Cylindropuntia echinocarpa	silver cholla
GERIANIACEAE	*GERANIUM FAMILY*
*Erodium cicutarium**	redstem stork's bill
ONAGRACEAE	*SUNCUP FAMILY*
Eulobus californicus	California primrose
PLANTAGINACEAE	*PLANTAIN FAMILY*
Plantago ovata	desert plantain

SPECIES/SCIENTIFIC NAME	FAMILY/COMMON NAME
ROSEACEAE	*ROSE FAMILY*
Purshia tridentata	bitterbrush
ZYGOPHULLACEAE	*CALTROP FAMILY*
Larrea tridentata	creosote bush

Floral compendia identified during surveys were recorded in terms of relative abundance and host habitat type. Floral taxonomy used in this report follows the *Jepson Manual* (Hickman 1993) and for sensitive species, the *California Native Plant Society Rare Plant Inventory*, 5th Edition (Pavlik and Skinner 1994). Additional common plant names are taken from Munz (1974) and Sawyer and Keeler-Wolf (2009)

Appendix D

Wildlife Compendia

APPENDIX D

Wildlife Compendia

The following is a list of wildlife species recorded by CASC at the **Copart 66 Project Site in Adelanto, California** on April 6, 2023, November 8,14, and 17, 2023. Presence may be noted if a species is seen or heard, or identified by the presence of tracks, scat, or another sign.

*Indicates introduced nonnative species

SPECIES/SCIENTIFIC NAME	COMMON NAME
AVES	***BIRDS***
COLUMBIDAE	*PIGEONS AND DOVES*
Zenaida macroura	mourning dove
CORVIDAE	*CROWS AND RAVENS*
Corvus brachyrhunchos	American crow
Corvus corax	common raven
PASSERIFORMES	*NEW WORLD SPARROW*
Zonotrichia leucophrys	white-crowned sparrow

Taxonomy and nomenclature follows Beher (1998) and Laudenslayer et.al. (1991. A checklist of the amphibians, reptiles, birds, and mammals of California. California Fish and Game 77:109-141.), Sibley (2000) and the American Ornithologists' Union (1998. The A.O.U. Checklist of North American Birds, 7th Ed. American Ornithologists' Union, Washington D.C.

Appendix E

CNDDB Summary Table

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Adelanto (3411754))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Athene cunicularia burrowing owl	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	2,880 3,200	2011 S:8	0	2	2	3	0	1	0	8	8	0	0
Buteo swainsoni Swainson's hawk	G5 S4	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	880 880	2561 S:1	0	0	0	0	1	0	1	0	0	1	0
Gopherus agassizii desert tortoise	G3 S2S3	Threatened Threatened	IUCN_CR-Critically Endangered	2,968 2,968	985 S:2	0	2	0	0	0	0	0	2	2	0	0
Toxostoma lecontei Le Conte's thrasher	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	2,790 2,835	238 S:4	0	0	0	0	0	4	4	0	4	0	0
Xerospermophilus mohavensis Mohave ground squirrel	G3 S2	None Threatened	BLM_S-Sensitive IUCN_NT-Near Threatened	2,520 2,980	432 S:3	0	0	1	0	0	2	1	2	3	0	0

APPENDIX C
Jurisdictional Delineation Report

Copart 66

City of Adelanto, County of San Bernardino, California

APN #: 3128-341- [01, 02, 04, 06]

JURISDICTIONAL DELINEATION REPORT

Prepared For:

Copart Inc.
Valfair Construction
Mr. Benjamin Stephens
benjamin.stephens@valfair.com

Prepared By:

CASC Engineering and Consulting, Inc.
27710 Jefferson Avenue, Suite 105
Temecula, California 92590
Contact: Dennis Peterson, Senior Biologist
Phone: 949.350.7358
dpeterson@cascinc.com

January 2024

Section 1 Introduction

On behalf of Copart, Inc., Casc Engineering and Consulting (Casc) has prepared this Jurisdictional Delineation Report (Report) for development of a fully paved car storage lot for wrecked cars with an adjacent parking area on a vacant parcel in the City of Adelanto, San Bernardino County, California. This Report describes the jurisdictional resources, record searches and literature review, survey methodology, and results of the field surveys and review conducted for the Project.

1.1 PROJECT LOCATION

The Project Site is located on the corner of Holly Road and Racoon Avenue in the City of Adelanto. The Project will include the development of a parking lot to store all totaled vehicle types at the facility (i.e. cars, trailers, trucks, rv's, etc.) in the City of Adelanto, San Bernardino County, California (Figure 1, Regional Vicinity).

1.2 PROJECT BACKGROUND AND DESCRIPTION

The Project Site consists of 65.95 gross acres located on the southwest corner of Racoon Avenue and Holly Road in the City of Adelanto (Assessor Parcel Numbers (APNs): 3128-341- [01, 02, 04, and 06] as seen on U.S. Geological Society (USGS) 7.5-minute *Adelanto* Quadrangle (Figure 2, USGS Quadrangle Map). The surrounding properties are undeveloped and access to the site was unobstructed. The proposed Project will include the development of a parking lot to store totaled vehicles of all types including cars, trailers, trucks, recreational vehicles for the purpose of selling via online auctions, and to store throughout the insurance claim process. The Project Site is currently vacant and undeveloped. Proposed onsite improvements include grading, rock ballast surfacing, an eight-foot-tall perimeter fence to screen from street views, three (3) detention basins, a drainage corridor, and three (3) commercial entrances that will be paved and gated. Off-site improvements include curb and gutter, sidewalk, landscape easements, and a culvert storm drain north of Cactus Road. Site Plans are provided in Appendix A, Conceptual Plans.

1.3 REGULATORY BACKGROUND

Several regulations have been established by federal, state, and local agencies to protect and conserve aquatic resources. The descriptions below provide a brief overview of agency regulations that may be applicable to the project. Regulatory agencies make the final determination of whether a project requires authorization pursuant to these regulations.

1.3.1 APPLICABLE AQUATIC RESOURCE PROTECTION REGULATIONS

Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA), the U.S. Army Corps of Engineers (USACE) is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S. (including wetlands), which include those waters listed in 33 CFR 328.3 (USACE 2020). USACE, with oversight from the U.S. Environmental Protection Agency (USEPA), has the principal authority to issue CWA Section 404 permits. The USACE would require a Standard Individual Permit (SIP) for more than minimal cumulative adverse effects on the environment may meet the conditions of an existing Nationwide Permit (NWP) (USACE 2021).

A water quality certification or waiver pursuant to Section 401 of the CWA is required for all Section 404 permitted actions. The Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board, provides oversight of the 401-certification process in California. The RWQCB is required to provide "certification that there is reasonable assurance that an activity that may result in the discharge to waters of the United States will not violate water quality standards." Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards.

The National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the U.S. under Section 402 of the CWA.

California Fish and Game Code Sections 1600-1602

Pursuant to Division 2, Chapter 6, Section 1602 of the California Fish and Game Code (CFGC), CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. A Notification of Lake or Streambed Alteration must be submitted to California Department of Fish and Wildlife (CDFW) for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation (i.e., drip line) or at the top of the bank of streams or lakes, whichever is wider (CDFW 2010, 2023). CDFW jurisdiction does not include tidal areas or isolated resources. CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and applicant is the Lake or Streambed Alteration Agreement

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) provides for statewide coordination of water quality regulations. The State Water Resources Control Board

was established as the statewide authority and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis. The RWQCB is the primary agency responsible for protecting water quality in California. As discussed above, the RWQCB regulates discharges to surface waters under the federal CWA. In addition, the RWQCB is responsible for administering the California Porter-Cologne Water Quality Control Act.

Pursuant to the Porter-Cologne Water Quality Control Act, the state is given authority to regulate waters of the state, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if Section 404 is not required for the activity. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

1.4 CONTACT INFORMATION

Applicant and Property Owner:

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Valfair Construction
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benjamin.stephens@valfair.com
Phone: (208) 762-2645

Agent:

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Figure 1

Regional Vicinity

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

CASC Engineering and Consulting
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Aerial: ESRI World Imagery, San Bernardino County 2/5/2020; ESRI USA Topo Maps
County: ESRI USA Counties, accessed 5/18/2023
Map Date: 5/17/2023



N 0 2 4 Miles
1" = 4 Miles

7.5 Minute Quadrangle Index

CASC Engineering and Consulting
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Aerial: ESRI World Topographic Map and World Hillshade
USGS 1:24,000 Topographic Maps 7.5- by 7.5-minute quadrangles, accessed 5/18/2023
Map Date: 5/18/2023

Figure 2

USGS Quadrangle Index

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

Section 2 Methodology

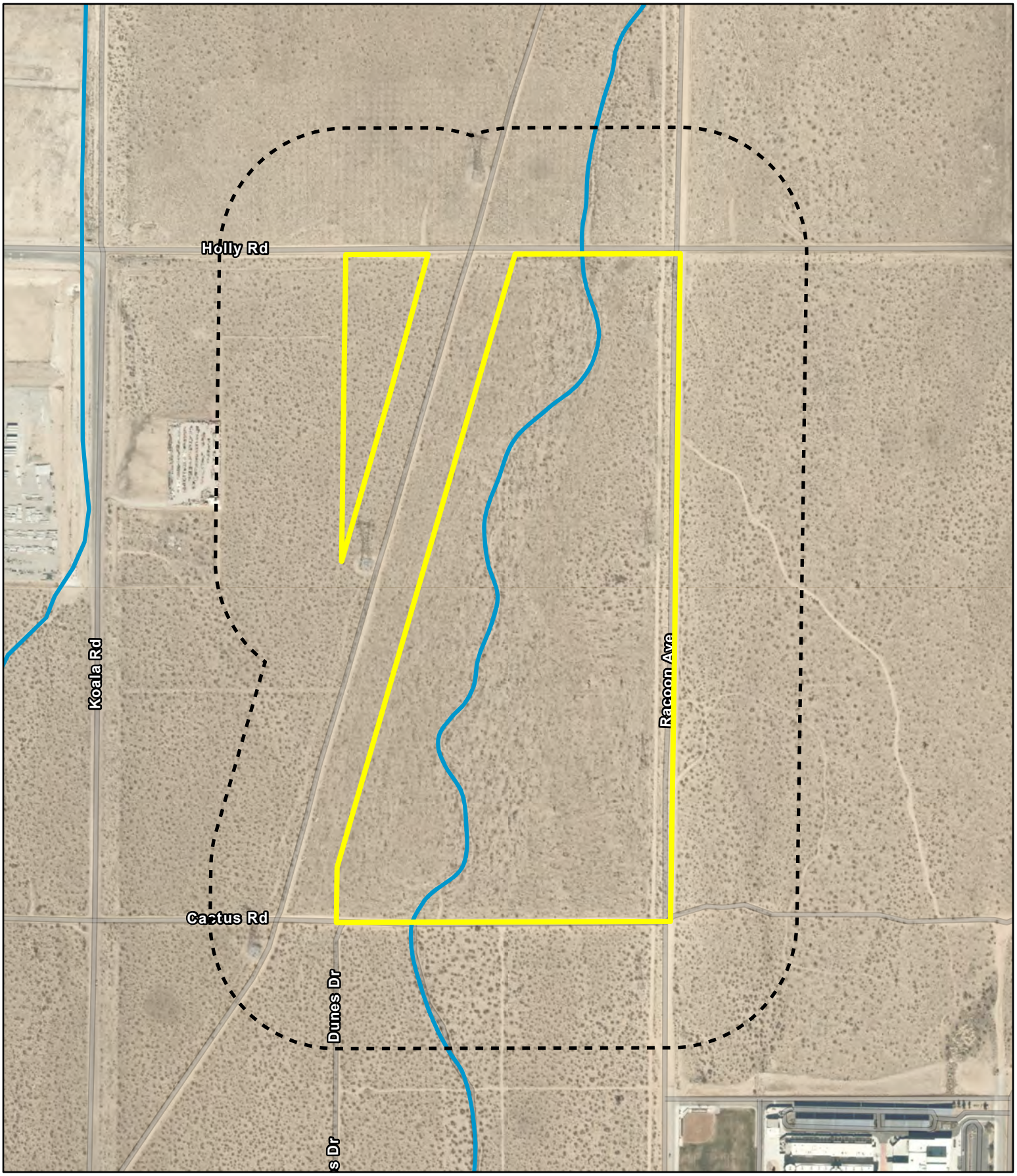
Prior to the on-site delineation, field maps were created using a Geographic Information System (GIS) and incorporating topographic maps with two-foot contours and a color aerial photograph at a 1:100 scale. U.S. Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI), U.S. Geological Survey (USGS), and National Hydrography Dataset (NHD) data was overlaid on a USGS topographic map of the area to further determine the locations of potential areas of jurisdiction (Figures 3 National Wetlands Inventory Map and Figure 4 National Hydrology Dataset Map). Google Earth was utilized to assess the presence or absence of visible flow patterns historically and in recent years.

Dennis Peterson, Senior Biologist, Casc Engineering and Consulting (Casc) conducted the jurisdictional delineation field visit on November 28, 2023. Areas with depressions, drainage patterns, and/or wetland vegetation within the project site boundary were evaluated for potential jurisdictional status, with focus on the presence of defined channels and/or wetland vegetation, soils and hydrology. Field staff examined potential jurisdictional wetland areas using the methods set forth in the Corps 1987 *Wetland Delineation Manual* (Wetland Manual) (Environmental Laboratory 1987) and the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0* (Arid West Supplement) (Corps 2008a). Wetland plant indicator status was determined using the *National Wetland Plant List* (NWPL; Corps 2020) and hydric soils indicators on *Field Indicators of Hydric Soils in the United States, Version 8.1 National Resources Conservation Service* (NRCS 2023). Soil chromas were identified in the field according to *Munsell's Soil Color Charts* (Kollmorgen 2000).

Lateral limits of potential non-wetland waters of the US (WOTUS), waters of the State (WOS), and RWQCB were identified using field indicators of an ordinary high-water mark (OHWM) as described in *A Field Guide to the Identification of the Ordinary High-Water Mark in the Arid West Region of the Western United States* (Corps 2008b). For each feature exhibiting potential presence of an OHMW, Casc completed a 2010 Arid West Ephemeral and Intermittent Streams OHWM Datasheet (OHWM Datasheet).

CDFW potential jurisdictional boundaries were determined based on the presence of a streambed (i.e., bed and bank) and associated riparian habitat. Streambeds considered within CDFW jurisdiction were delineated based on the following definition: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Riparian habitat refers to vegetation and habitat associated with a stream. The CDFW jurisdictional habitat includes all riparian, shrub or tree canopy that may extend beyond the banks of a stream.

While in the field, potentially jurisdictional features were recorded using a hand-held Global Positioning System (GPS) (Arrow 100) unit with a level of accuracy within one foot.



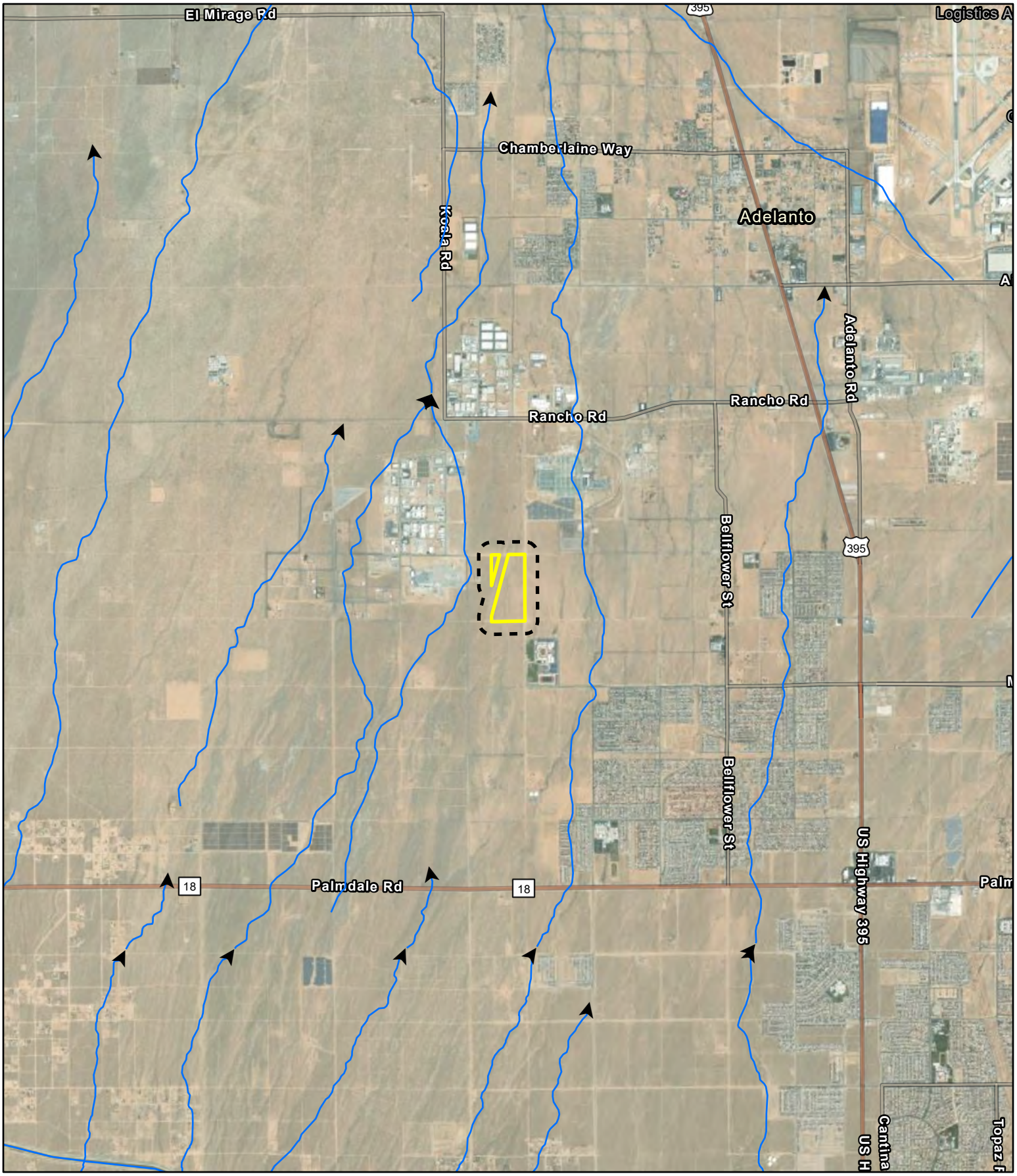
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Figure 3
National Wetland Inventory Map

APN: 3128-341-[01, 02, 04 & 06]

Aerial: ESRI World Imagery, San Bernardino County 2/5/2020
NWI: U.S. Fish and Wildlife Service 10/7/2022, accessed 5/19/2023
Map Date: 5/19/2023

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Figure 4
National Hydrography Dataset Map

APN: 3128-341-[01, 02, 04 & 06]

Aerial: ESRI World Imagery, San Bernardino County 2/5/2020
NHD: USGS National Hydrology Dataset Plus Version 2.1 accessed 12/5/2023
Map Date: 12/5/2023

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

Section 3 Results

3.1 TOPOGRAPHY

Elevations on-site range from 3,050 and 3,010 feet above mean sea level. Potentially jurisdictional areas on the project site include evidence of one ephemeral stream which flows south to north though the Project Site entirely within APN 3128-341-04.

3.2 WATERSHED

The proposed Project Site is within the Mojave Hydrologic Unit Code [HUC] 8 (18090208), Upper Fremont Wash HUC 10 (1809020805), and the HUC 12 (180902080502) sub-watershed. NHD maps this feature as an ephemeral stream (Figure 4). The sub-watershed drains north to the Fremont Wash. The Fremont Wash drains northeast to the Mojave River.

3.3 HYDROLOGY

To date, the rainfall for 2023 in the Project region has been recorded at 10.30 inches. This total is more than 6.8 inches above the 10-year annual average of 3.48 inches. This is indicative of a relatively wet year where evidence of recent hydrology should be easily observable in the field.

Annual precipitation data for the Project region is shown below in Table 1 Precipitation Data for Adelanto, California. This table describes the estimated monthly total and average precipitation for the Project region between 2013 and 2023. Casc's biologist accessed precipitation data through the National Resources Conservation Service (NRCS) Agricultural Applied Climate Information System (AgACIS) database from the Redlands Station in San Bernardino County on January 2, 2024 (Table 1, Adelanto 3.1S Station Precipitation Data).

The field survey conducted on November 28, 2023, occurred during below-average historic precipitation of 0.22 inches for the month of November 2023. The ten-year average during the month of November has been recorded at 0.37 inches (Table 1).

Table 1. Precipitation Data for Adelanto, California

Monthly Total Precipitation (inches) for Adelanto, CA													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2013	0.37	0.18	0.1	M	M	M	M	0.18	0.05	M	0.81	M	1.69
2014	0.02	0.34	0.04	M	M	M	0.1	M	0.37	M	0.04	0.83	1.74
2015	0.83	0.2	M	M	M	0.03	0.71	0.02	M	0.14	M	0.18	2.11
2016	0.75	M	M	0.09	M	M	M	M	M	0.14	0.15	1.02	2.15
2017	1.18	1.46	0.1	M	M	M	0.02	0.18	M	M	M	M	2.94
2018	0.34	0.12	0.42	M	M	M	M	M	M	M	0.05	1.48	2.41
2019	0.56	0.96	0.55	M	0.12	M	0.09	M	M	M	0.49	1.44	4.21
2020	M	M	1.08	1.91	M	M	M	0.2	M	M	M	0.5	3.69
2021	1.06	0.03	0.04	M	M	0.02	0.33	M	M	0.33	M	0.75	2.56
2022	M	M	0.12	0.22	M	0.26	1.01	M	0.79	0.63	0.83	0.66	4.52
2023	1.43	2.58	1.34	M	M	M	M	3.89	0.07	M	0.22	0.77	10.3
Mean	**0.73**	**0.73**	**0.42**	**0.74**	**0.12**	**0.1**	**0.38**	**0.89**	**0.32**	**0.31**	**0.37**	**0.85**	**3.48**

*Per AgACIS database: "Monthly summarized data - means, sums, daily extremes or frequencies for the selected variable for each month of the year for the selected range of years. HDD, CDD and GDD are heating, cooling and growing degree days, respectively. Note: trace precipitation/snowfall/snow depth amounts are treated as zero in sums, means, and frequency counts. Annual average temperatures are the average of the twelve-monthly values. Values of 'M' indicate missing data and 'T' indicates a trace."

3.4 SOILS

Per the NRCS soil survey, the Project site consists of two soil types, Cajon Sand (112) and Helendale Bryman Loamy Sands (133) (Figure 5, Soils Map). Cajon Sand is characterized as 0 to 2 percent slopes and is well drained with very low runoff potential. The proportion of soil components rated as hydric is 5%. Helendale Bryman Loamy Sands are characterized as 2 to 5 percent slopes and is well drained with very low runoff potential. The proportion of soil components rated as hydric is 0%.

3.5 FEATURES OBSERVED

Desktop review of available literature identified one aquatic feature in the Project. This feature occurred solely within APN 3128-341-04 and bisects the parcel from Cactus Road to Holly Road. The feature is mapped within the NWI as R4SBJ (Figure 3) and is described as an intermittent riverine streambed with surface water occurring without detectable seasonal periodicity. This can result in weeks, months, or years between occurrences of observable surface water. The feature

is also mapped within the NHD as an ephemeral stream flowing south to north from Cactus Road to Holly Road (Figure 4).

The dominant plant species on the Project Site consisted of creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), rubber rabbitbrush (*Ericameria nauseosa*), and cheesebrush (*Ambrosia salsola*). Western Joshua tree (*Yucca brevifolia)* is another prominent feature on the Project Site. If western Joshua tree abundance is greater than 1% the site would be characterized as Joshua tree woodland. The assessment concluded that Joshua trees did not equal or exceed either actual or relative abundance on the overall Project Site. It was determined the most appropriate description of the vegetation community is *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance (creosote bush – white bursage scrub) from the Manual of California Vegetation (CNPS). This corresponds to a Mojave creosote bush scrub vegetation community as described in Holland (Holland 1986).

In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Hydrophytic vegetation is plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, and herb layers) is considered hydrophytic. To be considered hydrophytic, the species must have wetland indicator status, i.e., be rated as obligate (OBL: occurring primarily in wetlands), facultative wet (FACW: occurring usually in wetlands) or facultative (FAC: equally likely to occur in wetlands and non-wetlands).

No hydrophytic vegetation was observed on site and the soils are primarily sandy and well drained. Given these field observations combined with the lack of hydric soils mapped in the area, a wetland should not occur within the Project Site. As a result, wetland sample points were not needed in the field. At the time of the site visit no water was flowing or present on the Project Site; however, evidence of hydrology was present in the riverine features from the streambed and evidence of ponding at the north end of the project (Appendix B, Site Photos).

Because of these field conditions, Casc's biologist subsequently completed an Arid West Ephemeral and Intermittent Streams Ordinary High Watermark (OHWM) Datasheet to determine jurisdictional boundaries of observed non-wetland waters (Appendix C, OHWM Data Sheets). The lateral extent of USACE jurisdiction was measured at the OHWM. The streambed was primarily unvegetated and indicators for OHWM were a break in bank and slop, change of vegetation cover, and drift and debris deposits.

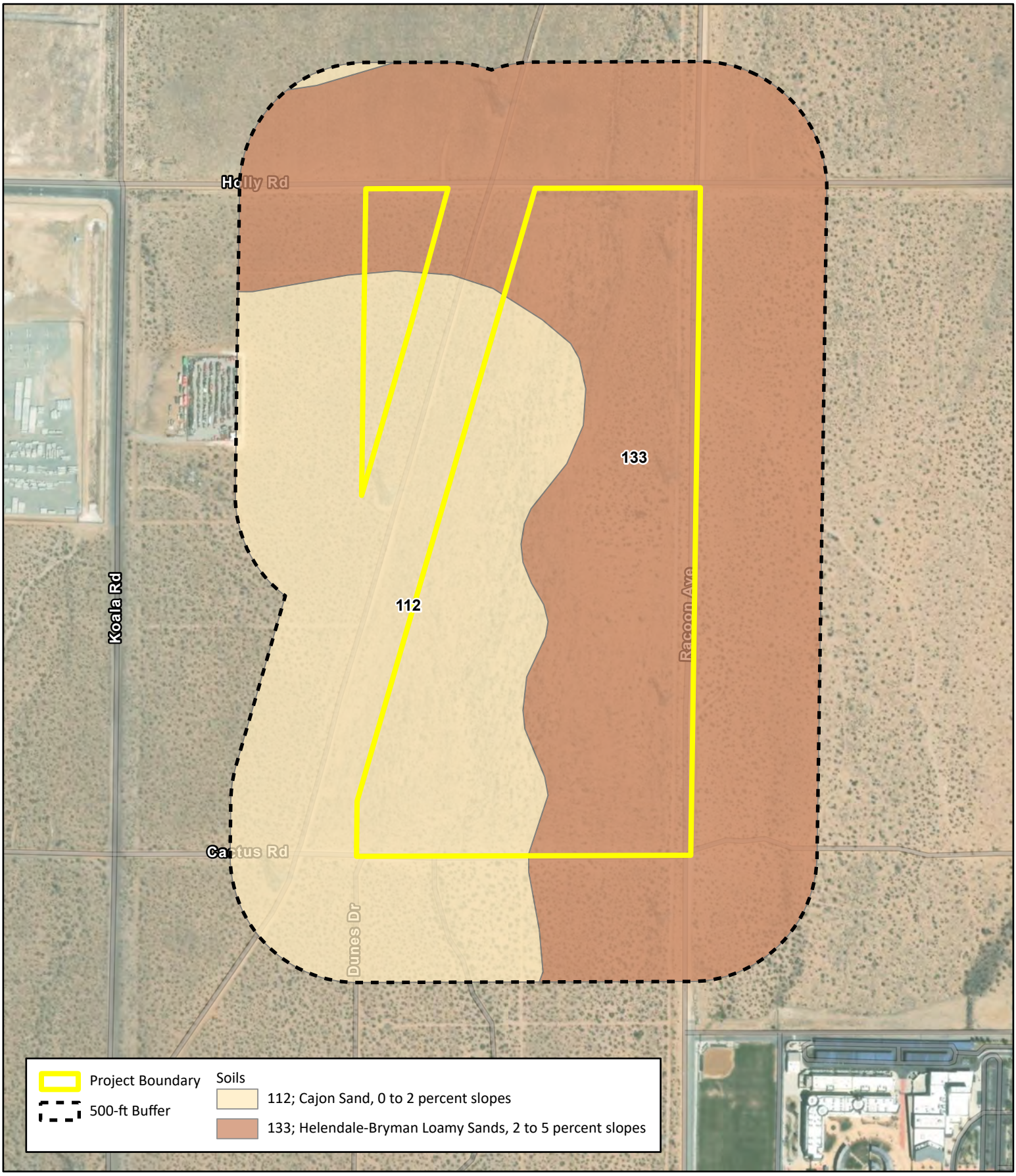
The site survey revealed an ephemeral stream roughly aligning with NWI and NHD maps (Figures 3 and 4, respectively). The historical flow of the stream has been altered by both Cactus and Holly Road construction in the past. Currently water flows onto the Project Site from Cactus Road which is a combination of water flowing from the southern portion of the stream offsite flowing onto Cactus Road, and the runoff accumulated on Cactus Road east and west of stream. Riverine features are observable where water enters the site from Cactus Road and consists of a defined

bed and bank with an observable OHWM. Two OHWM sample points (transects) were collected along the length of the streambed (Appendix C, Datasheets). The demarcation identified at the sample points was followed and mapped to delineate potential jurisdictional boundaries throughout the Project Site and adjacent buffer (Figure 6, Jurisdictional Delineation and Photo Points).

The lateral extent of a CDFW jurisdictional streambed can be measured in several ways depending on a particular situation. The outer edge of riparian vegetation is used as the line of demarcation between riparian and upland habitats and is therefore an identifiable boundary of the lateral extent of a CDFW jurisdictional drainage. On smaller streams or dry washes with little or no riparian habitat, the top of bank-to-top of bank width (TOB) is used to mark the lateral extent of the jurisdictional drainage, as was the case for this jurisdictional delineation.

There are no obvious signs of riparian vegetation surrounding the streambed and ponding area, however there is an observable increase in the abundance of cheesebrush and rubber rabbitbrush and decrease in abundance of white bursage and western Joshua tree. This may be more due to soil disruption by water flow and less to do with an increase in water supply. This would likely limit CDFW jurisdictional concern to the TOB in the riverine feature. The TOB was mapped for this feature within the Project Site and the associated buffer (Figure 6).

These riverine features continue onsite until the northern end of the Project Site where they dissipate nearer to Holly Road. This is the result of ponding at the northern end of the Project Site where surface cracking is visible in more silty soils. The ponding is a result of berms built up on either side of Holly Road. There is no evidence these berms have been breached, by water flow, in any recent times. The historical streambed starts up again on the north side of Holly Road and continues to flow north, but the source of this flow appears to be just the direct runoff from Holly Road. This effectively isolates these non-wetland waters from further flow into the watershed toward Fremont Wash and ultimately the Mojave River. These non-wetland waters are thus not likely to be determined jurisdictional by the USACE but may still be considered jurisdictional by the RWQCB.



N 0 250 500 Feet
1" = 500 Feet

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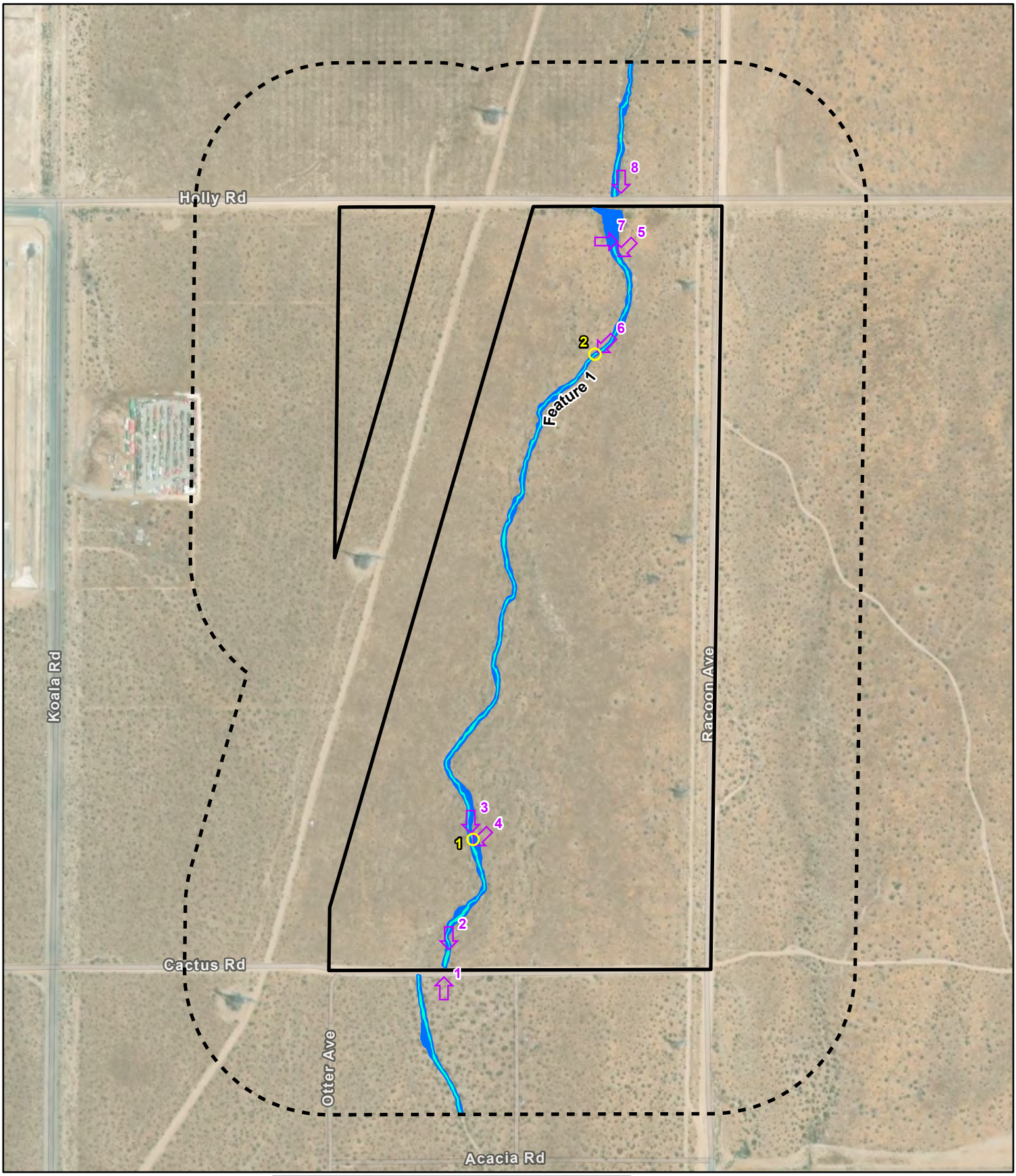
Aerial: ESRI World Imagery, San Bernardino County 2/5/2020
Soils: USDA-NRCS, accessed 12/5/2023
Map Date: 10/11/2023

Figure 5

Soils

APN: 3128-341-[01, 02, 04 & 06]

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Aerial: ESRI World Imagery, 6/14/2023
Map Date: 1/18/2024

Figure 6
Jurisdictional Delineation and Photo Points

APN: 3128-341-[01, 02, 04 & 06]

Copart 66 Adelanto
SEC of Racoon Ave and Holly Rd

3.6 JURISDICTIONAL RESOURCES AND ANALYSIS

Waters of the U.S. (WOTUS) are defined as: “All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters”. CWA jurisdiction exists over the following:

1. all traditional navigable waters (TNWs);
2. all wetlands adjacent to TNWs;
3. non-navigable tributaries of TNWs that are relatively permanent (RPW) (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally); and
4. every water body determined to have a significant nexus with TNWs.

This unnamed feature is an ephemeral stream that flows only during and/or just after rain events, these events are infrequent in this area that averages around 3.5 inches/year, and thus would be classified as a non-relatively permanent water (RPW) by the USACE. This ephemeral feature appears to currently terminate on the Project Site at Holly Road where water pools and percolates below the surface. There are no visible signs of water crossing north of Holly Road in the recent past, however an aerial streambed signature is observable from historical aerial images which is evidence of connectivity in the past (Google Earth). The berm on Holly Road remains intact with no evidence of water flow even with well above average precipitation in 2023 (Table 1). The streambed north of Holly Road continues flowing north but dissipates at points losing riverine features where water disperses and percolates below the surface in the well drained soils. This feature does not appear to be an RPW and has no connection to a TNW even if historical flow across or under Holly Road were established.

Wetlands

There is no historical, biological, or hydrological evidence that would indicate the presence of wetland features. The area of ponding on the northern edge of the Project Site, as evidenced by silty soils and surface cracking, still appears relatively well drained with no evidence of hydrophytic vegetation or an absence of vegetation. None of the mapped soils on site are listed on the USDA-NRCS National Hydric Soils List. The duration, timing, and frequency of inundation on the Project Site provides no indication or validation of wetland ecology. Water does not accumulate on surface for seasonal periods (more than 3 weeks) of inundation. Clay soils are not mapped on site. The Project Site lacks the water retention capabilities necessary to support wetlands. The biological functions and values of wetlands do not exist on the Project Site. Areas meeting all three parameters would be designated as USACE wetlands. All three requirements were not met. Therefore, no wetlands were identified on the Project Site during this investigation.

3.7 PROPOSED JURISDICTIONAL IMPACTS

The Project does not appear to contain any jurisdictional WoUS. The stream does not appear to qualify as an RPW with any nexus to a TNW. Permanent impacts at the proposed Project Site will be contained within the project boundary (Figure 7, Jurisdictional Delineation Impacts). The entirety of the Project Site will be graded. The ephemeral stream will be redirected so it is contained within a 200-foot-wide drainage corridor (Appendix A).

The Project Site contains no wetland WOTUS or wetland WOS and lacked aquatic features with all three wetland indicators (i.e., hydrophytic vegetation, hydric soils, and hydrology). The Project Site includes 0.39 acre (2,806 linear feet) of potentially non-wetland waters of the State, subject to RWQCB jurisdiction. The Project Site contains 0.39 acre (2,806 linear feet) of unvegetated streambed and 0.77 acres (2,955 linear feet) of vegetated area to TOB that combines to 1.16 acres (5,761 linear feet) potentially subject to CDFW jurisdiction (Table 2, Potential Jurisdictional Aquatic Features, Table 3, Potential Impacts by Jurisdiction). The limits of CDFW jurisdiction include non-wetland waters, and extend beyond, to include the full extent of the riparian corridor defined here as TOB. The area of ponding at the north end of the Project Site is included in the CDFW jurisdictional area. The lack of riparian vegetation at the Project Site further supports these conclusions (Table 4, Vegetation Communities at the Project Site).

Table 2. Potential Jurisdictional Aquatic Features

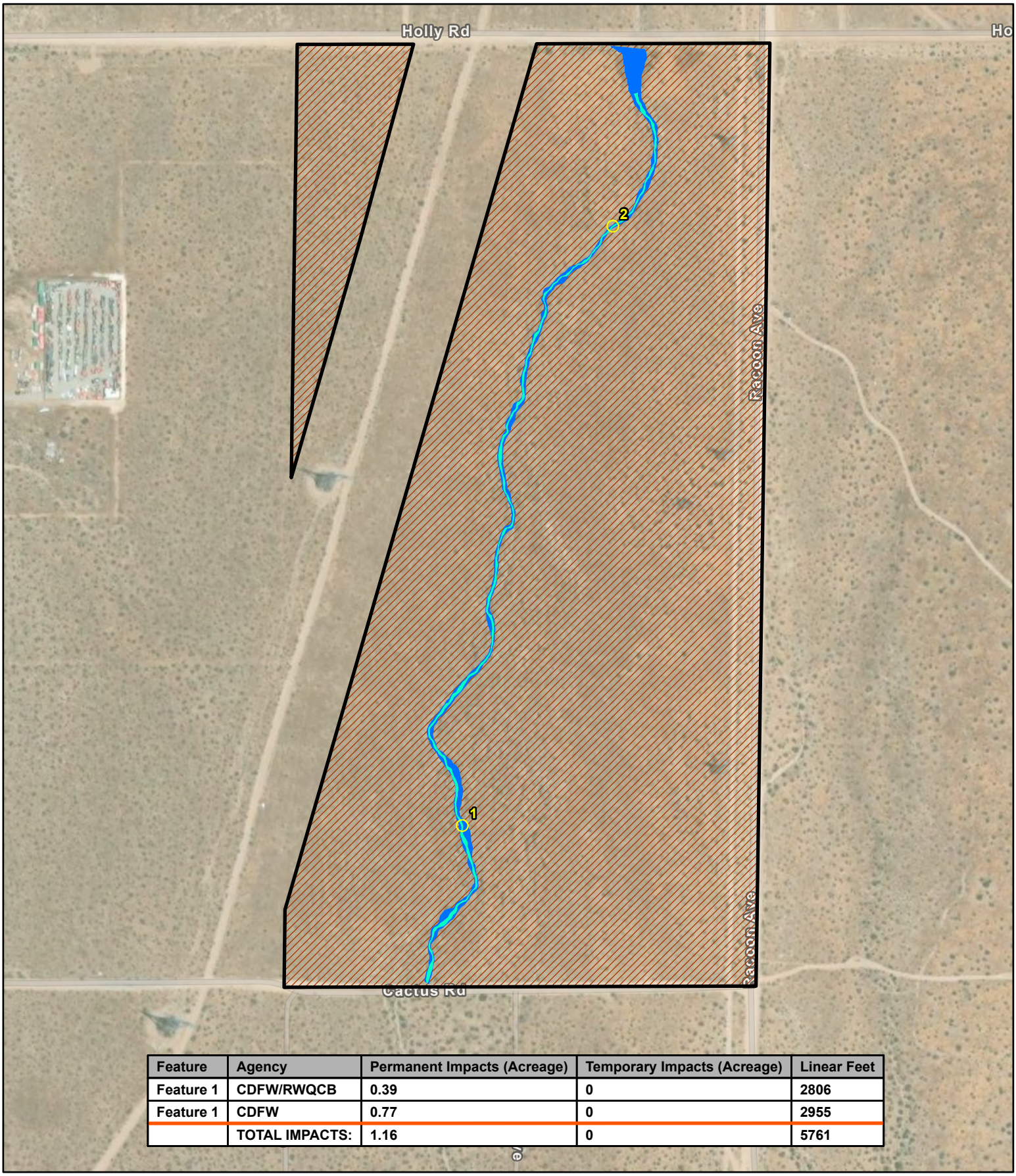
	Wetland Waters of U.S./State		Non-wetland Waters of U.S./State		Waters of the State (Unvegetated Streambed)		Waters of the State (Riparian Habitat)	
	(USACE/RWQCB)		(USACE/RWCQB)		(CDFW)		(CDFW)	
Aquatic Feature	**Acres**	**Linear Feet**	**Acres**	**Linear Feet**	**Acres**	**Linear Feet**	**Acres**	**Linear Feet**
Unnamed streambed	0	0	0.53	3,782	0.53	3,782	0.99	3,931
Total	0	0	0.53	3,782	0.53	3,782	0.99	3,931

Table 3. Potential Impacts by Jurisdiction

	Wetland Waters of U.S./State		Non-wetland Waters of U.S./State		Waters of the State (Unvegetated Streambed)		Waters of the State (Riparian Habitat)	
	(USACE/RWQCB)		(USACE/RWQCB)		(CDFW)		(CDFW)	
Aquatic Feature	**Acres**	**Linear Feet**	**Acres**	**Linear Feet**	**Acres**	**Linear Feet**	**Acres**	**Linear Feet**
Unnamed streambed	0	0	0.39	2,806	0.39	2,806	0.77	2,955
Total	0	0	0.39	2,806	0.39	2,806	0.77	2,955

Table 4. Vegetation Communities at the Project Site

Vegetation Type	**Acreage within 500-ft Buffer**	**Acreage within Project Site**
Mojave creosote bush scrub	120.64	65.92
Unvegetated Streambed	0.14	0.39
TOTAL	**120.78**	**66.31**



Feature	Agency	Permanent Impacts (Acreage)	Temporary Impacts (Acreage)	Linear Feet
Feature 1	CDFW/RWQCB	0.39	0	2806
Feature 1	CDFW	0.77	0	2955
	TOTAL IMPACTS:	1.16	0	5761

N

0 177 354 Feet

1" = 354 Feet

Project Boundary

Permanent Impacts

Sample Transect

Agency Jurisdiction

CDFW/RWQCB

CDFW

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Aerial: ESRI World Imagery, 6/14/2023

Map Date: 1/18/2024

Figure 7
Jurisdictional Delineation Impacts

APN: 3128-341-[01, 02, 04 & 06]

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SEC of Racoon Ave and Holly Rd

Section 4 Recommendations

Pursuant to the Porter-Cologne Water Quality Control Act, it is anticipated that Project activities will require the issuance of Waste Discharge Requirements (WDRs) by the State Water Boards. The application form, Application: Discharges of Dredged or Fill Material to Waters of the State, and applicable fees would be submitted to the RWQCB at least 45 days before any Project activity.

The CDFW regulates temporary and permanent alterations or impacts to streambeds or lakes under California Fish and Game Code Sections 1600 et seq. Notification of Lake or Streambed Alteration to CDFW is required for projects that will divert or obstruct the natural flow of water; change the bed, channel, or bank of any stream; or use any material from a streambed. A Streambed Alteration Agreement (SAA) is issued by CDFW as a contract between the applicant and CDFW stating what activities can occur in the riparian zone and stream course (California Association of Resource Conservation Districts 2002). If impacts to CDFW jurisdiction are proposed, Notification of Lake or Streambed Alteration would be required by CDFW.

Pursuant to Section 1600 of the California Fish and Game Code, a Notification of Lake and Streambed Alteration, and associated permit filing fee is recommended for submittal to CDFW. Effective September 1, 2020, all notifications for Standard Agreements must be submitted through CDFW's Environmental Permit Information Management System (EPIMS) Permitting Portal.

Section 5 References

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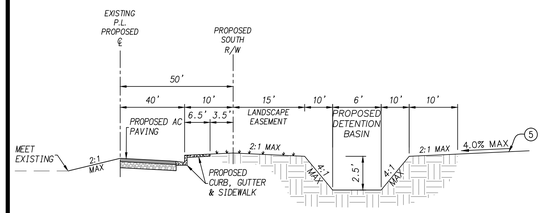
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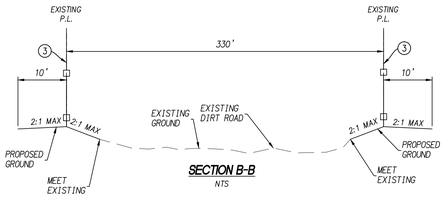
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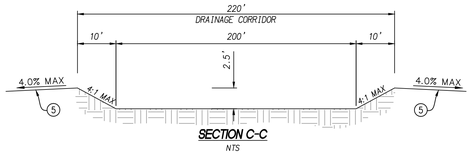
Appendix A Conceptual Grading Plan



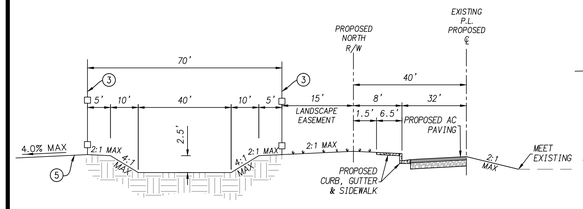
SECTION A-A
NTS



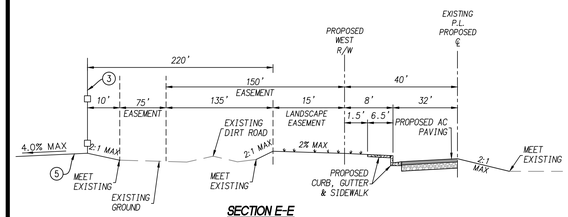
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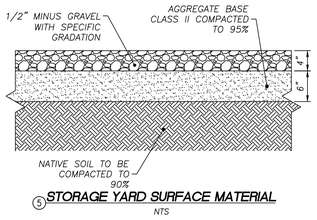
SECTION C-C
NTS



SECTION D-D
NTS



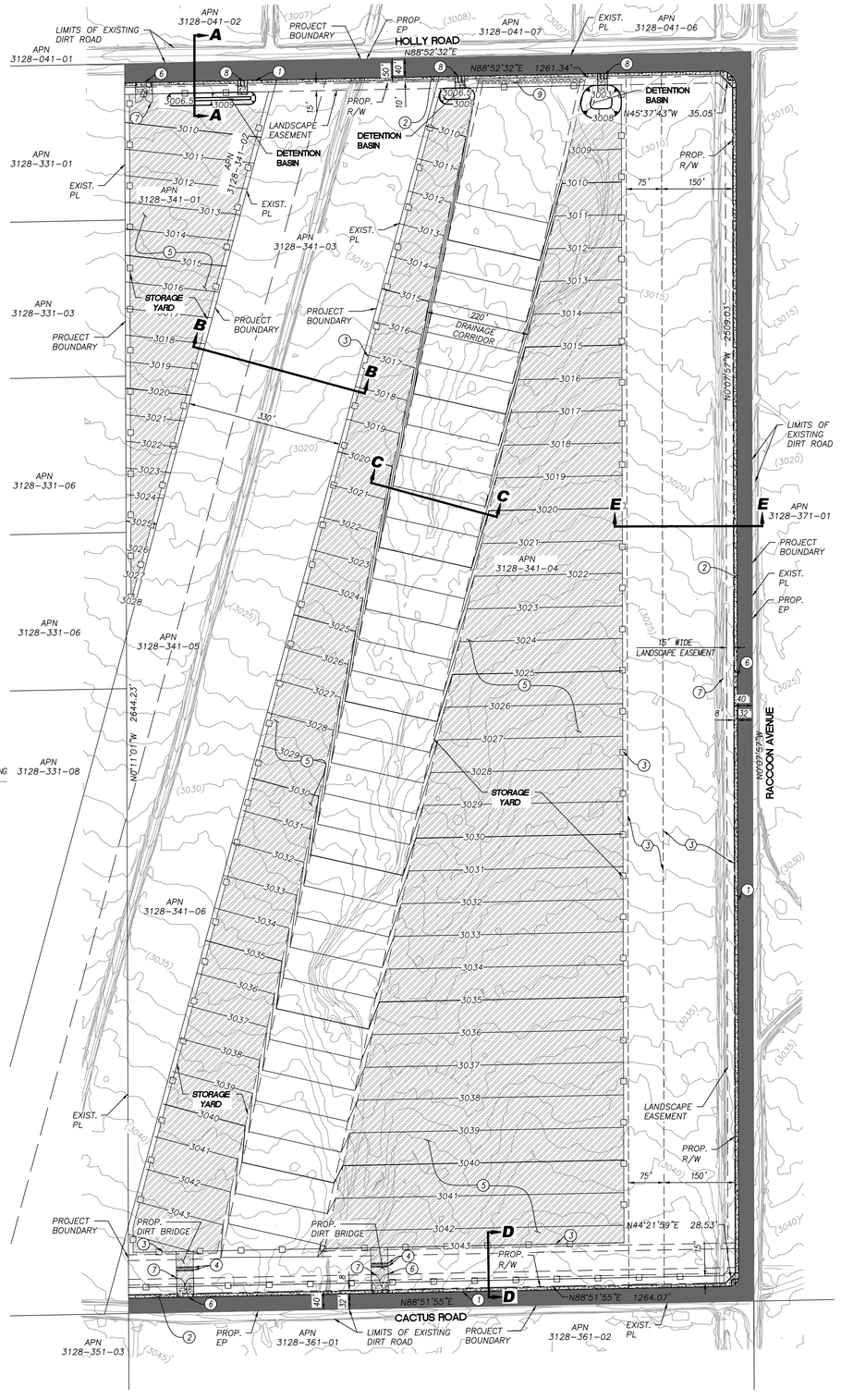
SECTION E-E
NTS



STORAGE YARD SURFACE MATERIAL
NTS

LEGEND

- PROJECT BOUNDARY
- 1330 — PROPOSED CONTOUR
- (1330) — EXISTING CONTOUR
- PROPOSED FENCE
- 2.30% PROPOSED GRADE
- ℄ CENTERLINE
- R/W RIGHT OF WAY
- P.L. PROPERTY LINE
- GB GRADE BREAK
- TC TOP OF CURB
- EP EDGE OF PAVEMENT
- FS FINISH SURFACE
- FL FLOWLINE
- XX.XX PROPOSED ELEVATION
- (XX.XX) EXISTING ELEVATION
- PROPOSED PCC PAVING
- PROPOSED AC PAVEMENT
- PROPOSED 4" GRAVEL OVER 6" CLASS II BASE
- PROPOSED RIP-RAP



CONSTRUCTION NOTES

1. PROPOSED CURB AND GUTTER
2. PROPOSED SIDEWALK
3. PROPOSED 8' TALL METAL FENCE
4. PROPOSED 18" CULVERT STORM DRAIN
5. PROPOSED STORAGE YARD MATERIAL PER DETAIL HERON
6. PROPOSED COMMERCIAL DRIVEWAY
7. PROPOSED SECURITY GATE
8. INSTALL PARKWAY DRAINS
9. INSTALL RIP-RAP

LEGAL DESCRIPTION

PARCEL 1:
GOVERNMENT LOT 1 OF THE NORTHWEST 1/4 OF SECTION 7, TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND APPROVED BY THE SURVEYOR GENERAL, DATED MARCH 19, 1856.
EXCEPTING THEREFROM THAT PORTION GRANTED TO VICTOR G. SABO AND ELLA B. SABO, HUSBAND AND WIFE, IN DEED RECORDED FEBRUARY 15, 1966 IN BOOK 6571, PAGE 355 OF OFFICIAL RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.
ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF LOS ANGELES, A MUNICIPAL CORPORATION IN DEED RECORDED MAY 14, 1985 AS INSTRUMENT NO. 85-113429 OF OFFICIAL RECORDS.
PARCEL 2:
THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 7, BEING A PORTION OF GOVERNMENT LOT 1 OF SAID NORTHWEST 1/4, ALL IN TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND APPROVED BY THE SURVEYOR GENERAL, DATED MARCH 19, 1856.
EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF LOS ANGELES, A MUNICIPAL CORPORATION, IN DEED RECORDED JUNE 17, 1985 AS INSTRUMENT NO. 85-144097 OF OFFICIAL RECORDS.

EASEMENTS

1. RESERVATIONS CONTAINED IN THE PATENT IN FAVOR OF THE UNITED STATES OF AMERICA IN BOOK L PAGE 19, RECORDED MARCH 09, 1918 OF PATENTS
2. EASEMENT IN FAVOR OF BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION FOR PUBLIC UTILITIES FILED IN BOOK 6571 PAGE 355, RECORDED FEBRUARY 15, 1965, OF OFFICIAL RECORDS

(3) EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY FOR PUBLIC UTILITIES RECORDING NUMBER 90-388717, RECORDED SEPTEMBER 28, 1990, OF OFFICIAL RECORDS

UTILITY NOTIFICATION

SOUTHWEST GAS
13471 MARIPOSA ROAD
VICTORVILLE, CA 92392
PHONE: (760) 951-4044

SOUTHERN CALIFORNIA EDISON
30553 RIMROCK ROAD
BARSTOW, CA 92311
PHONE: (760) 252-6402

CITY OF ADELANTO (SEWER & WATER)
11600 AIR EXPY
ADELANTO, CA 92301
PHONE: (760) 246-2300

SOUTHERN CALIFORNIA GAS COMPANY
1981 WEST LUGONIA AVENUE
REDLANDS, CA 92373
PHONE: (909) 335-7750

FONTANA WATER COMPANY
15966 ARROW ROUTE
FONTANA, CA 92335
PHONE: (909) 822-2201

SOURCE OF SURVEY

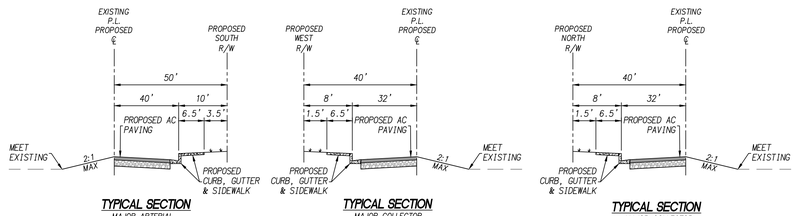
AERIAL TOPOGRAPHIC SURVEY
DATED AUGUST 2022
AS CONDUCTED BY
CASC ENGINEERING AND CONSULTING
1470 EAST COOLEY DRIVE
COLTON, CALIFORNIA 92324
PHONE: (909) 783-0101

ESTIMATED RAW EARTHWORK QUANTITIES

BASE SURFACE :	1510-0002 EG
COMPARISON SURFACE:	1510-0002 FG
CUT VOLUME (UNADJUSTED):	64,076 CY*
FILL VOLUME (UNADJUSTED):	27,474 CY*

*CONCEPTUAL GRADING ANTICIPATED TO BALANCE AFTER LOSSES.

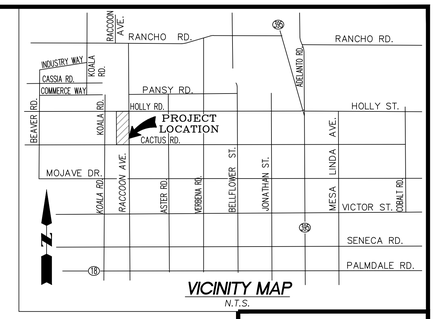
NOTE: RAW EARTHWORK QUANTITIES ARE BASED UPON FINISHED SURFACE ELEVATIONS, AND DO NOT INCLUDE GEOTECHNICAL SOIL FACTORS OR SOIL DISPLACEMENTS FROM SITE IMPROVEMENTS.



TYPICAL SECTION
MAJOR ARTERIAL
HOLLY ROAD - FACING EAST
NTS

TYPICAL SECTION
MAJOR COLLECTOR
RACCOON AVENUE - FACING NORTH
NTS

TYPICAL SECTION
MAJOR COLLECTOR
CACTUS ROAD - FACING EAST
NTS



VICINITY MAP
N.T.S.

GRAPHIC SCALE
120 0 60 120 240
1" = 120'

CASC
Engineering and Consulting
1470 EAST COOLEY DRIVE, COLTON, CA 92324
PH: (909) 783-0101 FAX (909) 783-0108
www.cascinc.com

CONCEPTUAL GRADING PLAN

COPART RACOON 66

COPART INC.
APN 3128-341-01, 02, 04, 06
CITY OF ADELANTO

SEALS:

REGISTERED PROFESSIONAL ENGINEER
PATRICK C. FLANAGAN JR.
NO. C 086046
CIVIL
STATE OF CALIFORNIA

PREPARED FOR/APPLICANT:
COPART, INC.
ATTN: MR. CRAIG GARDNER
14185 DALLAS PARKWAY
DALLAS, TX 75254
(972) 564-5525

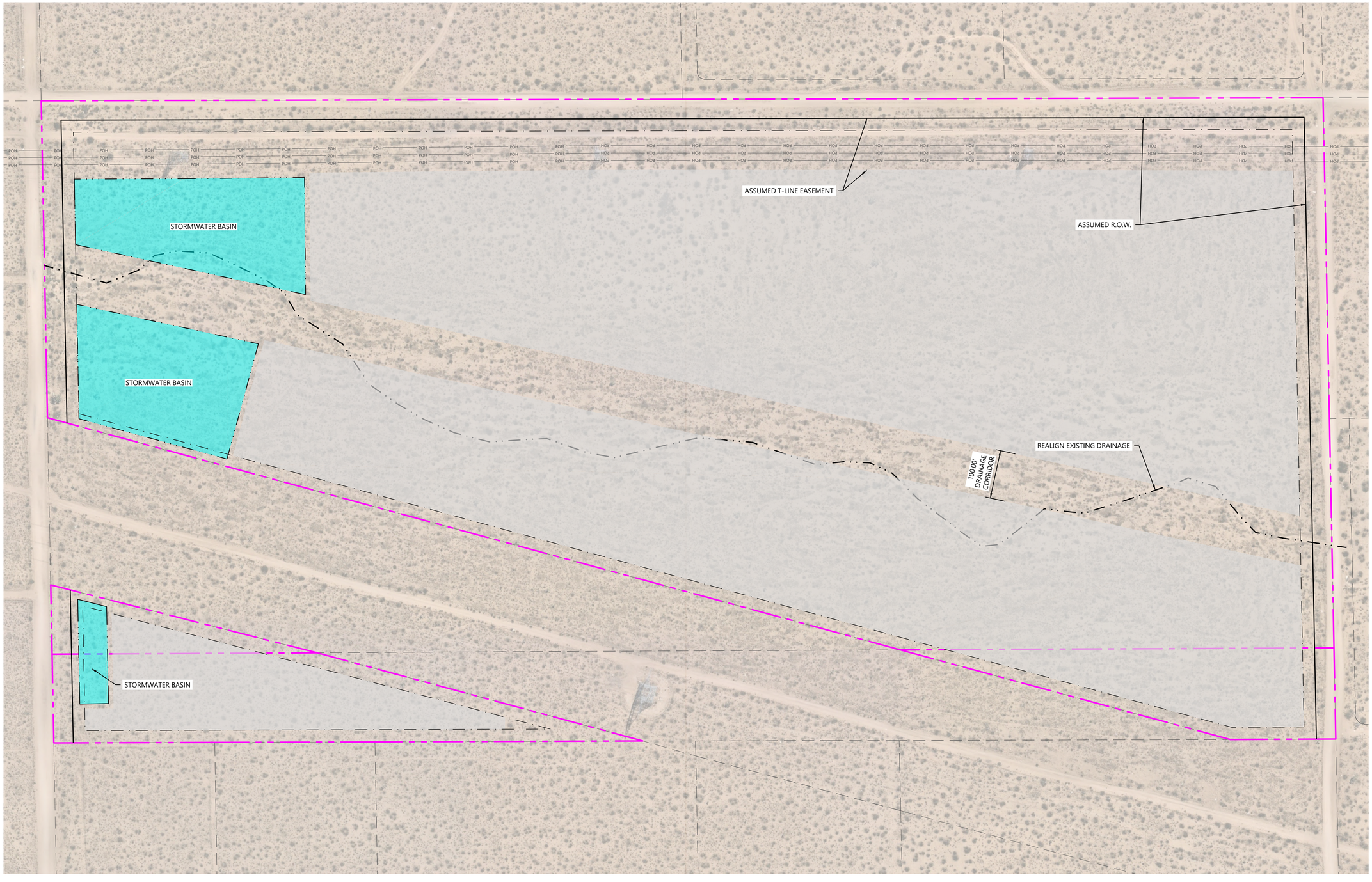
PROPERTY OWNER:
GOLDEN CITY LAND COMPANY, INC.
AND
THOMAS HSU AND CEVILIA WU

BENCHMARK:
A 3" BRASS DISK STAMPED "CITY OF ADELANTO B.M. 5538" AT THE SOUTHEAST CORNER OF THE INTERSECTION OF HOLLY AND ASTER ROADS.
ELEVATION 3001.906' NGVD 29 1/1991

BASIS OF BEARING
CALIFORNIA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (CORS96) EPOCH SURVEY CONTROL CORS REFERENCE STATION DESIGNATION "BALDYMESA_CS2004 CORS ARP" PID "DH4097"AND "EL_MIRAGE_CS2008 CORS ARP" PID "DN7425".
BEING N37°01'44"W NAD 83 EPOCH 2010

CGP

© 2022 Westwood Professional Services, Inc.



NOT FOR CONSTRUCTION

N:\0035770.00\DWG\CONCEPTS & EXHIBITS\0035770SK01.DWG

ADELANTO, CA 66 AC

DESIGNED: .
CHECKED: .
DRAWN: .
HORIZONTAL SCALE: 100'
VERTICAL SCALE: 20' OR 10'

INITIAL ISSUE: 03/08/22
REVISIONS:
1 . .
2 . .
3 . .
4 . .
5 . .

PREPARED FOR: Copart

. .
DATE: 03/08/22 LICENSE NO. .

ADELANTO, CA 66 AC
ADELANTO, CA

Westwood
Phone (320) 253-9495 3701 12th Street North, Suite 206
Fax (320) 358-2001 St. Cloud, MN 56303
Toll Free (800) 270-9495 westwoodps.com
Westwood Professional Services, Inc.

SITE CONCEPT PLAN

PROJECT NUMBER: 0035770.00

SHEET NUMBER: 1 OF 1
DATE: 03/08/22

Appendix B Site Photos



Photograph 1. Water enters south end of Project Site from Cactus Road.



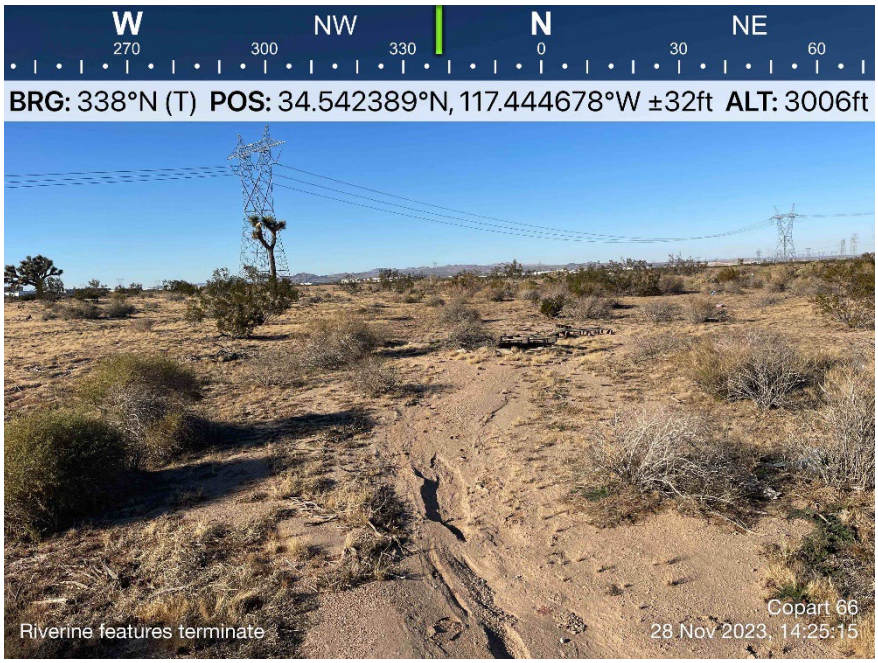
Photograph 2. Looking south toward Cactus Road at drainage entry from road runoff.



Photograph 3. Location of OHWM transect # 1. Unvegetated streambed visible with sparsley vegetated floodpain.



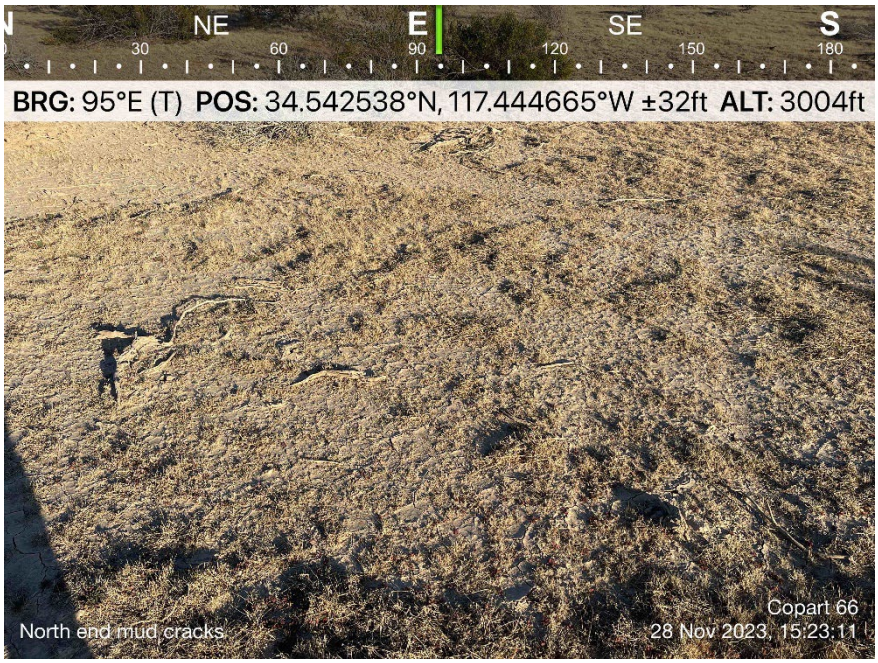
Photograph 4. OHWM transect #1 looking to the north. Unvegetated streambed visible with sparsley vegetated floodpain.



Photograph 5. North end of Project Site where riverine features terminate.



Photograph 6. OHWM transect #2. Unvegetated streambed with sparsely vegetated floodplain.



Photograph 7. Area of ponding north end of Project Site. Surface cracking visible from standing water.



Photograph 8. Looking south from Holly Road. Road berm blocking further flow north off Project Site.

Appendices C Data Sheets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Copart
Project Number: 66
Stream: Unnamed
Investigator(s): Dennis Peterson

Date: 11-28-23 **Time:** 12:30
Town: Adelanto **State:** CA.
Photo begin file#: 1 **Photo end file#:** 8

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: APN 3128340 4 corner of Holly Rd & Racoon Ave
Projection: **Datum:** WGS84
Coordinates: 34.540022, -117.445375

Potential anthropogenic influences on the channel system:
Historical channel disrupted by road development

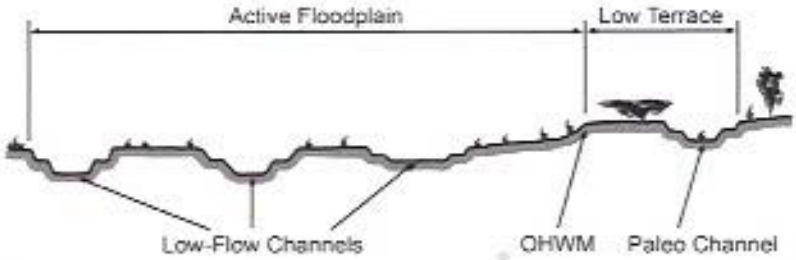
Brief site description:
Relatively flat parcel with a swale running through it. Mojave creosote scrub vegetation and sandy soils

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2000 - 2023
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☒ Soils maps
- ☒ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

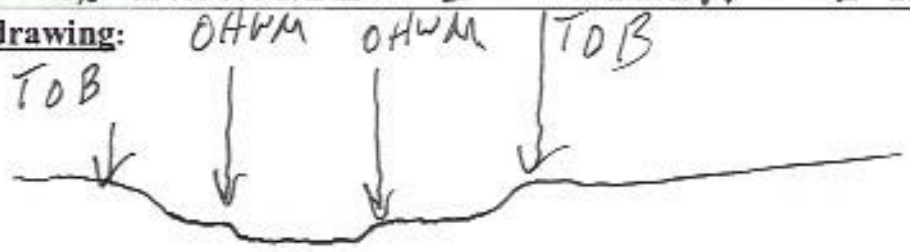


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: Copart 66 **Cross section ID:** 1 **Date:** 11-28-25 **Time:** 12:30

Cross section drawing:



OHWM

GPS point: 34.536832, -117.446252

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: Fairly well defined. Unvegetated within OHWM marks.

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: 34.536832, -117.446262

Characteristics of the floodplain unit:

Average sediment texture: Fine sand

Total veg cover: 0 % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [x] Other: Sediment Sorting
- [ ] Other: _____
- [ ] Other: _____

Comments: Narrow unvegetated streambed (channel)

Project ID: Copart 66 **Cross section ID:** 1 **Date:** 11-28/23 **Time:** 12:30

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: 34.536829, -117.446284

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 6 % Tree: 0 % Shrub: 3 % Herb: 3 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☒ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Narrow sections of F Flood plain.
A. Salsola density increases
(white bursage)

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Coyote
Project Number: 66
Stream: unnamed
Investigator(s): Dennis Peterson

Date: 4-28-23 **Time:** 12:30
Town: Adelanto **State:** CA
Photo begin file#: 1 **Photo end file#:** 8

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: APN 3128341104 Corner of Holly Rd. and Raccoon Ave.

Projection: **Datum:** WGS84
Coordinates: 34.540012, -117.445375

Potential anthropogenic influences on the channel system:
Historical ephemeral channel disrupted by road development.

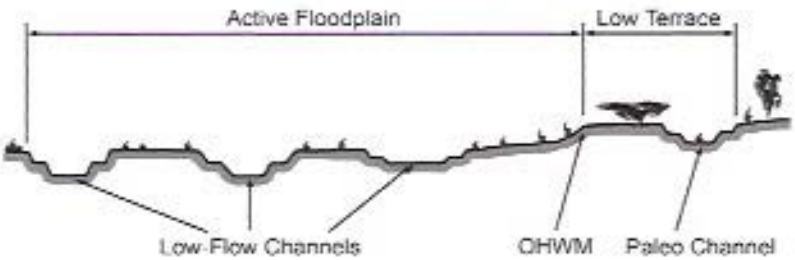
Brief site description: Relatively Flat parcel, a wash running north to south through it. Mojave creosote scrub vegetation community and sandy soils

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 2000 - 2023
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☒ Soils maps
- ☒ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies

- ☐ Stream gage data
  Gage number:
  Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

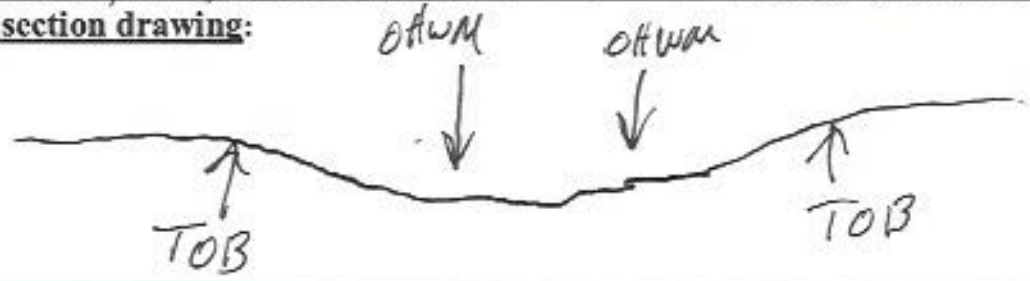


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☒ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: Copart 66 **Cross section ID:** 2 **Date:** 11-29-23 **Time:** 12:30

Cross section drawing:



OHWM

GPS point: 34.541457, -117.444920

Indicators:

- [x] Change in average sediment texture
- [ ] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: Well defined OHWM markings, Mostly unvegetated within OHWM's.

Floodplain unit: [x] Low-Flow Channel [ ] Active Floodplain [ ] Low Terrace

GPS point: 34.541464, -117.444925

Characteristics of the floodplain unit:

Average sediment texture: Fine Sand

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

- [x] NA
- [ ] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [ ] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: Narrow channel, unvegetated, appears well drained

Project ID: Cajon 66 **Cross section ID:** 2 **Date:** 11-25-23 **Time:** 12:30

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: 34.541469, -117.444934

Characteristics of the floodplain unit:

Average sediment texture: medium sand

Total veg cover: 25 % Tree: 0 % Shrub: 5 % Herb: 20 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Narrow Floodplain with some herbaceous vegetation beginning to appear. Some Ambrosia Salsola in Floodplain.

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: ____ % Tree: ____ % Shrub: ____ % Herb: ____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

APPENDIX D
Cultural and Paleontological Resource Report for Copart Racoon Avenue Project

DUKE CRM

18 Technology Dr., Ste. 103
Irvine, CA 92618
949-356-6660
www.dukecrm.com

May 2, 2023

Sabrina Snowball
CASC Engineering & Consulting
1470 East Cooley Drive
Walnut, CA 91789

Subject: Cultural/Paleontological Resources Services for the Copart Racoon Avenue Project, Located in Adelanto, County of San Bernardino, California (DUKE Project Number C-0467)

Dear Ms. Snowball:

At the request of CASC Engineering & Consulting (CLIENT), Duke Cultural Resources Management, LLC (DUKE CRM) has prepared a cultural and paleontological resources assessment for the Copart Racoon Avenue Project (Project), located in the City of Adelanto, San Bernardino County, California. The Project is approximately 66 acres. The City of Adelanto is the Lead Agency for the California Environmental Quality Act (CEQA). There is no federal nexus.

The Project is located at the intersection of Holly Road and Racoon Avenue, on APNs 3128-341-01, -02, -04, and -06 in Section 7, Township 5 North, Range 5 West, as shown on the USGS *Adelanto, Calif.* 7.5-minute topographic quadrangle map (see Attachment 1 for Project Maps). The Project will include a parking lot to store all totaled vehicle types at the facility, i.e., cars, trailers, trucks, RV's, etc., with three (3) stormwater basins along the western boundary of the Project. The anticipated maximum depth of excavation of approximately six (6) feet.

This report includes the result of research and field survey for cultural and paleontological resources.

Research

On January 18, 2023, DUKE CRM conducted a records search by the South Central Coastal Information Center (SCCIC) for the Project. The SCCIC located at the California State University, Fullerton is part of the California Historical Resources Information System. The records search included a review of all recorded cultural resources within a ½-mile radius of the Project, as well as a review of known cultural resource reports.

The records search identified seven (7) cultural resources within ½ mile of the Project (one [1] prehistoric site was recorded twice) (Table 1). Resource P-36-006532 is the nearest to Project, located approximately 245 feet north of the Project. This site consists of a historic refuse deposit and possible remnants of a homestead.

Additionally, the SCCIC identified eleven (11) cultural reports within ½-mile of the Project, none of which cover any portion of the Project. Table 2 summarizes the reports within ½-mile the Project.

Table 1. Cultural Resources within ½ mile of the Project

Resource No.	Resource Type	Description	NRHP Eligible	Distance (ft.) and Direction
P-36-000061/P-36-000241	Prehistoric	Lithic scatter, mano fragment	Unknown	1,500 west
P-36-005268	Historic	Refuse deposit	Unknown	2,870 south
P-36-006532	Historic	Refuse deposit, possible homestead	Unknown	245 north
P-36-007893	Prehistoric	Sparse debitage scatter	Unknown	1,100 west
P-36-012463	Historic	Refuse deposit	Unknown	2,520 east
P-36-012464	Historic	Refuse deposit	Unknown	2,255 east
P-36-061241	Prehistoric	Scraper Isolate	Unknown	1,350 east

Table 2. Reports within ½ mile of the Project Boundary

Report No.	Year	Report Title	Author(s)
SB-01158	1981	Class III Cultural Resource Inventory: Adelanto-Rinaldi 500 kV T/L Corridors 1, 2, and 3, Los Angeles Department of Water and Power	Roberta S. Greenwood and Michael J. McIntyre
SB-01479	1985	Mead/McCullough – Victorville/Adelanto Transmission Project Technical Report: Volume IV, Cultural Resources	Dames and Moore
SB-01504	1985	Cultural Resources Investigation for Los Angeles Department of Water and Power: Victorville-Rinaldi 500kV Transmission Line 1: Final Report	Roberta S. Greenwood and John M. Foster
SB-02120	1990	Results of an Intensive Archaeological Survey of Desert Rock Products Proposed Barstow Sand Pit in the Mojave River Channel, Sections 3 and 4, T9N, R2W, SBBM, San Bernardino County, California	Michael E. Macko
SB-02128	1990	Archaeological Inventory, Testing and Evaluation for the Southern California Edison Kramer-Victor 220 kV Transmission Line Project	Robert E. Parr, Richard Osborne, and Mark Q. Sutton
SB-02795	1991	Cultural Resource Investigation: Cajon Pipeline Project	Paul Hampson, James J. Schmidt, and June A. Schmidt H
SB-02796	1993	Cultural Resources Investigations, Site Inventory and Evaluations, the Cajon Pipeline Corridor, Los Angeles and San Bernardino Counties	Jeanette A. McKenna
SB-03020	1993	(Draft) Adelanto-Lugo Transmission Project Cultural Resources Assessment	Brad Sturm, D. Mclean, K. Becker, and J. Rosenthal
SB-07893	2006	Cultural Resources Survey for the Hansen 80-acre Parcel, City of Adelanto, San Bernardino County, California.	Sherri Andrews
SB-07970	2015	A Phase I Cultural Resources Investigation of Assessor Parcel Nos. 3129-541-01 and 3129-551-01 to -03, the Clark-Pacific Cement Plant Property in the City of Adelanto, San Bernardino Co., California	Jeanette A. McKenna
SB-07982	2013	Cultural Resources Impact Mitigation Analysis for the Adelanto North 2035 Sustainable Community Plan, City of San Bernardino County, California	Sara Dietler, Elizabeth Denniston, and Steven Treffers

Additionally, an inquiry to the Native American Heritage Commission (NAHC) was submitted to ascertain the presence of known sacred sites and other tribal cultural resources, Native American cultural resources, and/or Native American human remains within or adjacent to the boundaries of the proposed Project. On January 23, 2023, the NAHC Sacred Lands File indicated no Native American tribal resources have been identified within or adjacent to the Project location (Attachment 3).

DUKE CRM conducted a review of online historical aerial photographs and historical USGS quadrangle maps utilizing University of California, Santa Barbara FrameFinder, historicaerials.com, and USGS Historical Topographic Map Explorer. The *Adelanto* 1:24,000 scale map from 1952 or 1968 does not show any trails, roads, buildings or structures within the Project area. The 1985 1:24,000 scale map shows a small structure in the southwest area of site. The site remains relatively unchanged with the exception of a few dirt paths running throughout the site (Historicaerials.com accessed February 10, 2023).

DUKE CRM requested that the Western Science Center (WSC) perform a paleontological records search for known fossil localities within, and in the vicinity of, the Project. On January 12, 2023, the WSC found that there have been no paleontological resources discovered within the Project area or within a 1-mile radius of the Project. The geology in the vicinity of the Project has been mapped by Dibblee and Minch (2008). A review of this map indicates the proposed Project is located on alluvial sand and gravel of Holocene age (*Qa*). Holocene alluvial units are considered to be of high fossil preservation value, but material found is unlikely to be fossil material due to the relatively recent associated dates of the deposits (less than 12,500 years before present). However, if development requires any substantial depth of disturbance, the likelihood of reaching Pleistocene alluvial sediments beneath the younger Holocene deposits would increase. If excavation activity disturbs deeper sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, materials recovered may be scientifically significant. Excavation activity associated with the development of the Project area is unlikely to be paleontologically sensitive, but caution during development should be observed.

Field Survey

Alex Bulato, B.A., Archaeologist cross trained in paleontology and Michelle Dominguez, archaeological field crew at DUKE CRM, conducted an intensive pedestrian survey of the Project area on February 7, 2023. The survey area included the entirety of the Project with parallel pedestrian transects spaced no more than 15 meters apart. The surface visibility was excellent, ranging from 70-80 percent. The area has little vegetation consisting of Joshua trees and scattered bushes. There is modern debris scattered throughout the site. There is also a wash that runs north to south through the site (see Attachment 3 for photographs). No archaeological or paleontological resources were observed as a result of the field survey.

Conclusions

DUKE CRM assessed the proposed Project for impacts to cultural resources (both archaeological and paleontological) according to CEQA. As a result of negative findings during the field survey and negative findings within the Project boundary from the SCCIC, our assessment is that the Project has a low potential to impact important cultural resources. Therefore, no further actions are recommended with regards to archaeological resources.

The Project is considered to have a low potential to impact paleontological resources. The Project is located on Holocene age (*Qa*) sediments. There have been no fossil localities within one (1) mile of the Project. The sediment within the Project boundary has the potential to preserve remains at depth, but due to the young age it is unlikely paleontologically significant remains will be uncovered. The Project is anticipated to disturb sediments to a maximum depth of approximately six (6) feet. Given that the sediments are Holocene in age and the Project will likely impact more recent sediments, it is unlikely that important paleontological resources will be uncovered. Therefore, no further actions are recommended with regards to paleontological resources.

If previously unidentified cultural and/or paleontological materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist/paleontologist can assess the significance of the find. If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will identify and notify the Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Thank you for contacting DUKE CRM on this interesting project. If you have any questions or comments, you can contact me at (949) 356-6660, or by e-mail at morganbeigle@dukecrm.com.

Sincerely,

DUKE CULTURAL RESOURCES MANAGEMENT, LLC



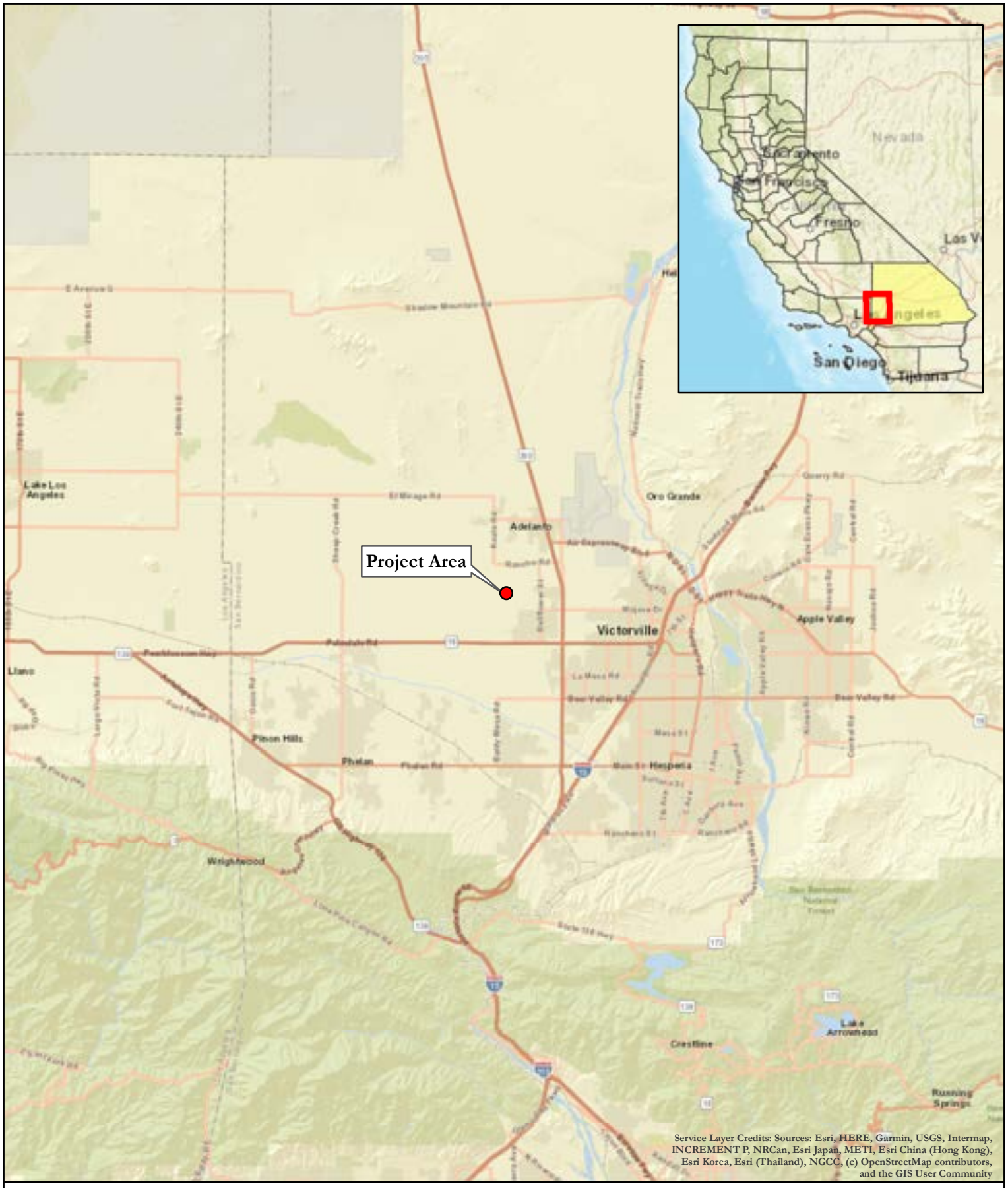
Morgan Beigle, M.A., RPA
Archaeologist

Attachments:

1: Project Maps
2: Native American Heritage Commission Letter
3: Project Photographs

ATTACHMENT 1

PROJECT MAPS



Map 1. Project Vicinity

COPART Racoon ISMD - Adelanto, C-0467

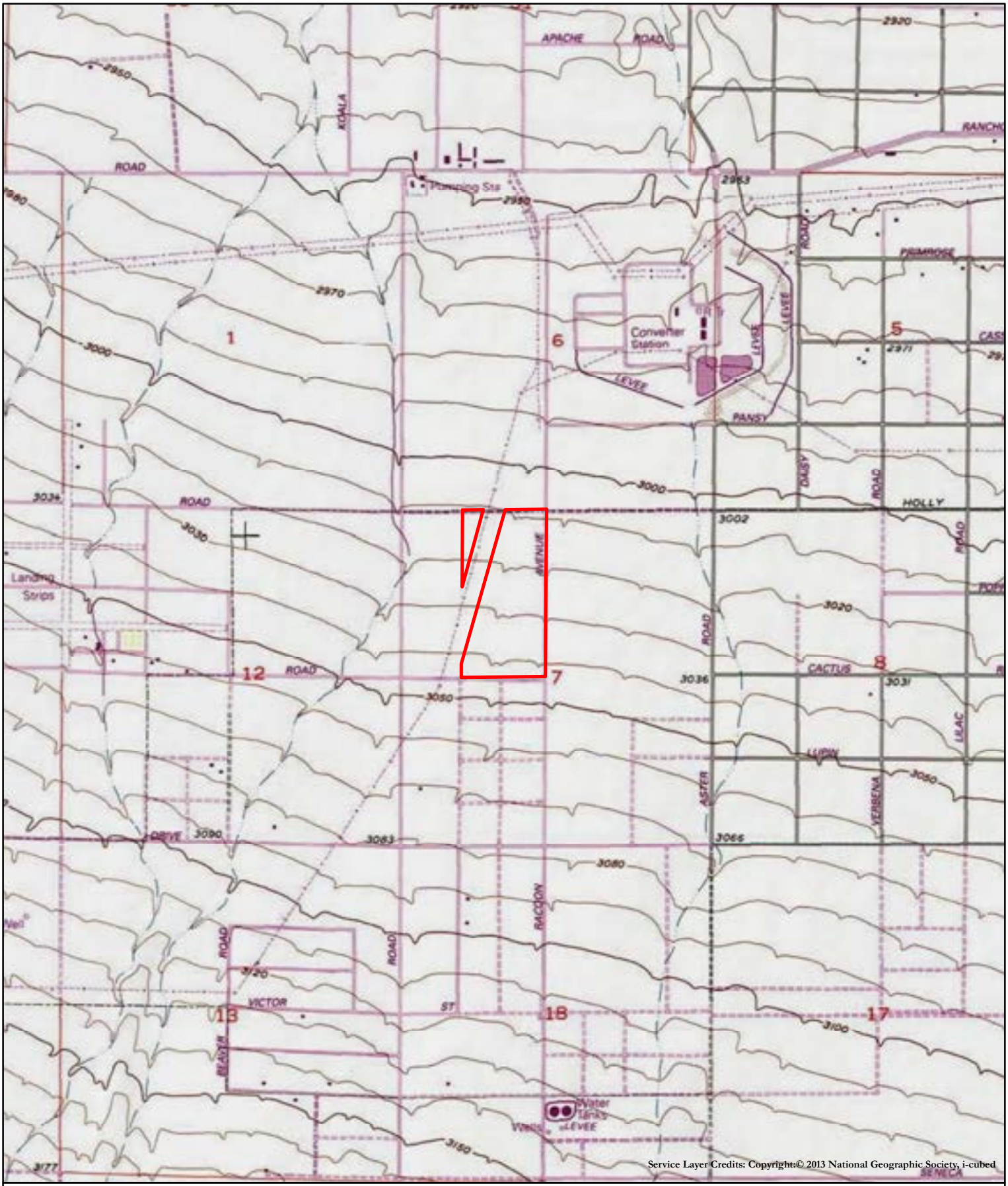
DUKE CRM

Project Area

0 6 12 Miles

N

1 inch = 6 miles 1:360,000



Map 2. Project Location
COPART Racoon ISMD - Adelanto, C-0467

DUKE CRM

Adelanto, Calif USGS 7.5-minute quadrangle
T5N, R5W, Section 7
Date of Map: 1956 / Photorevised: 1980

Project Area
USGS 7.5' Quads

0 0.25 0.5 Miles
0 0.25 0.5 Kilometers
N
1 inch = 2,000 feet 1:24,000



Map 3. Project Aerial Photo
COPART Racoon ISMD - Adelanto, C-0467

DUKE CRM

Project Area

0 300 600 Feet

N

1 inch =600 feet

1:7,200

ATTACHMENT 2

NATIVE AMERICAN HERITAGE COMMISSION LETTER

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
[Vacant]

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

January 23, 2023

Morgan Bender
DUKE CRM

Via Email to: morganbender@dukecrm.com

Re: C-0467 COPART Racoon ISMD--Adelanto Project, San Bernardino County

Dear Mr. Bender:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cameron.vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
1/23/2023

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010 — Kawaiisu
Lake Isabella, CA, 93240 — Tubatulabal
Phone: (760) 378 - 2915 — Koso
bbutterbredt@gmail.com

Kern Valley Indian Community
Brandy Kendricks,
30741 Foxridge Court — Kawaiisu
Tehachapi, CA, 93561 — Tubatulabal
Phone: (661) 821 - 1733 — Koso
krazykendricks@hotmail.com

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010 — Kawaiisu
Lake Isabella, CA, 93240 — Tubatulabal
Phone: (661) 340 - 0032 — Koso

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
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Newhall, CA, 91322 — Vanyume
Phone: (503) 539 - 0933 — Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Jessica.Mauck@sanmanuel-nsn.gov

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed C-0467 COPART Racoon ISMD--Adelanto Project, San Bernardino County.

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed C-0467 COPART Racoon ISMD--Adelanto Project, San Bernardino County.

ATTACHMENT 3

PROJECT PHOTOGRAPHS



Site overview. View to south.



Site overview. View to southwest.



Site overview. View to west.



Site overview. View to northwest.



Site overview. View to north.



Site overview. View to northeast.



Site overview. View to east.



Site overview. View to southeast.



Closeup of exposed sediment. Plan view.



Graded road bisecting site. View to southwest.

APPENDIX E
Racoon Avenue Energy Analysis

Racoon Avenue

ENERGY ANALYSIS

CITY OF ADELANTO

PREPARED BY:

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Shannon Wong
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MAY 8, 2023

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LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AQIA	*Racoon Avenue Air Quality Impact Analysis*
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
County	City of Adelanto
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HHDT	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy Duty Trucks
MARB/IPA	March Air Reserve Base/Inland Port Airport
MDV	Medium Duty Trucks
MHDT	Medium-Heavy Duty Trucks
MMcfd	Million Cubic Feet Per Day

mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Racoon Avenue
PV	Photovoltaic
SCAB	South Coast Air Basin
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SoCalGas	Southern California Gas
TEA-21	Transportation Equity Act for the 21st Century
U.S.	United States
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Racoon Avenue Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Statute and Guidelines (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Consistency with the above regulations is discussed in detail in section 5 of this report.

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Racoon Avenue Project (Project). The purpose of this report is to ensure that energy implication is considered by the City of Adelanto (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The Project site is located on the corner of Holly Road and Racoon Avenue (APN 3128-34-01, 02, 04, and 06) in the City of Adelanto, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of an industrial parking lot utilized for overflow vehicle storage located on approximately 66 acres, as shown in Exhibit 1-B. The Project is anticipated to have an Opening Year of 2024.

EXHIBIT 1-A: LOCATION MAP

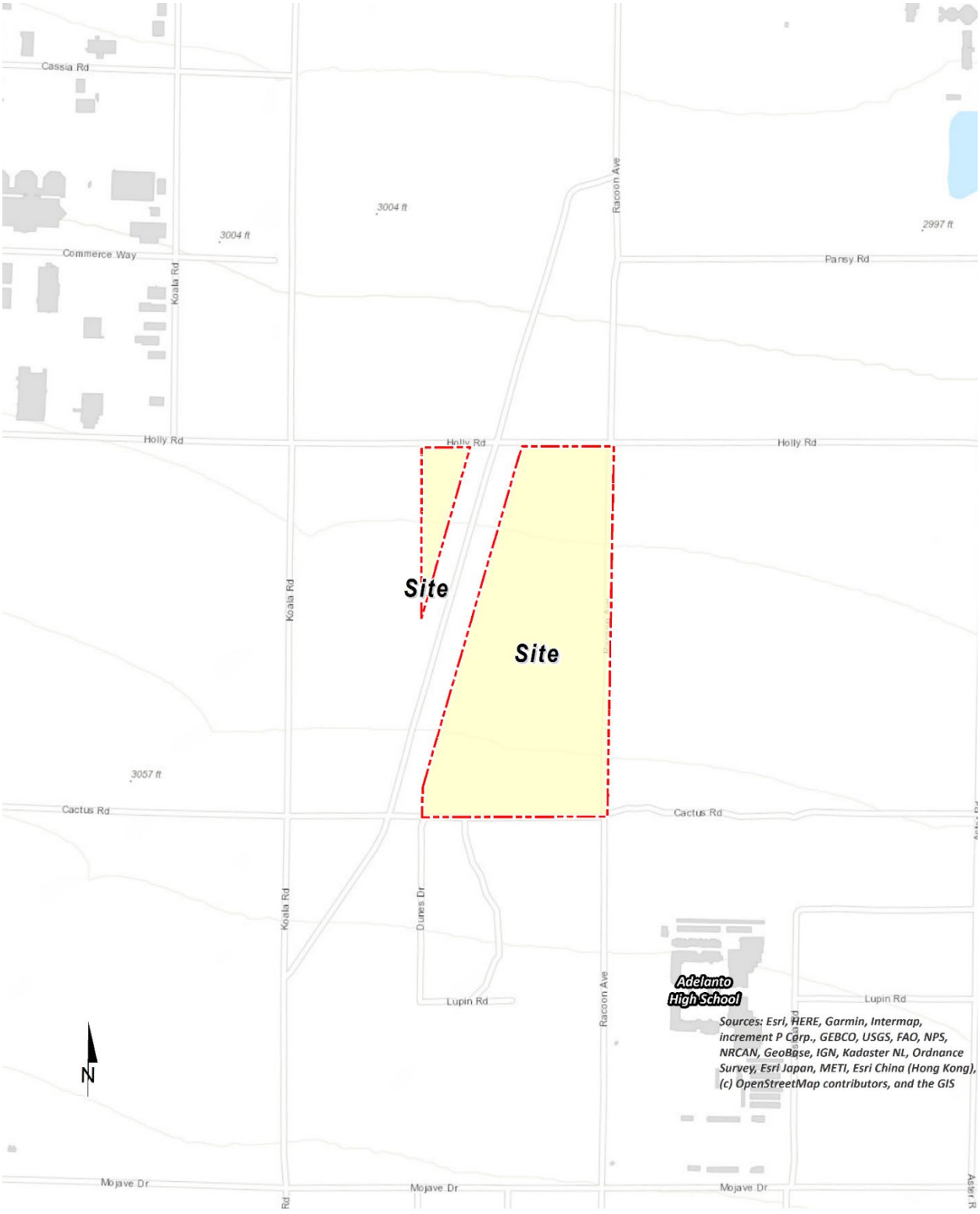
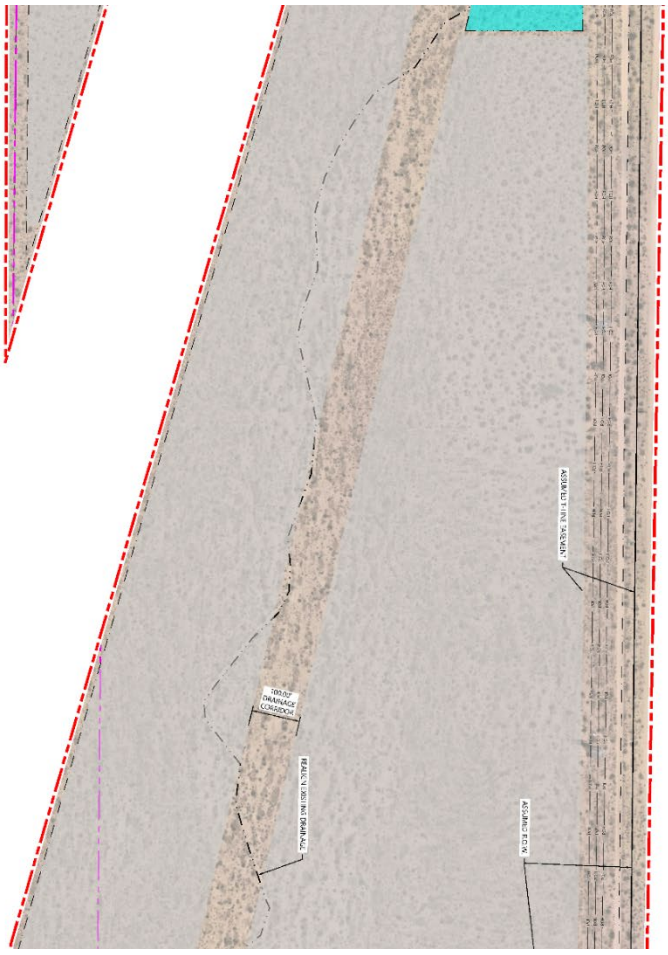


EXHIBIT 1-B: SITE PLAN



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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2020, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included (2):

- As of 2020, approximately 6,923 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2020, approximately 524 million barrels of petroleum
- As of 2020, approximately 2,075 billion cubic feet of natural gas
- As of 2020, approximately 1 million short tons of coal

According to the EIA, in 2021 the U.S. petroleum consumption comprised about 77% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (3). In 2021, about 249,790 million gallons (or about 5.95 million barrels) of finished petroleum products were consumed in the U.S., an average of about 684 million gallons per day (or about 16 million barrels per day) (4). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day) (5).

The most recent data provided by the EIA for energy use in California by demand sector is from 2020 and is reported as follows:

- Approximately 34.0% transportation
- Approximately 24.6% industrial
- Approximately 21.8% residential
- Approximately 19.6% commercial (6)

According to the EIA, California used approximately 247,250 gigawatt hours of electricity in 2021 (7). By sector in 2021, residential uses utilized 36.5% of the state's electricity, followed by 43.9% for commercial uses, 19.2% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building (7).

According to the EIA, California used approximately 200,871 million therms of natural gas in 2021 (8). In 2021 (the most recent year for which data is available), by sector, industrial uses utilized 33% of the state's natural gas, followed by 30% used as fuel in the electric power sector, 21% from residential, 11% from commercial, 1% from transportation uses and the remaining 3% was utilized for the operations, processing and production of natural gas itself (8). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (8).

In 2021, total system electric generation for California was 277,764 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 194,127 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (12%) and the U.S. Southwest (18%) (9). Natural gas is the main source for electricity generation at 50.2% of the total in-state electric generation system power as shown in Table 2-1.

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below (7):

- In 2021, California was the seventh-largest producer of crude oil among the 50 states, and, as of January 2021, it ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states and, the state accounted for 15% of the nation's jet fuel consumption and 10% of motor gasoline consumption in 2020.
- In 2019, California was the second-largest total energy consumer among the states, but its per capita energy consumption was less than in all other states except Rhode Island, due in part to its mild climate and its energy efficiency programs.
- In 2021, California was the nation's top producer of electricity from solar, geothermal, and biomass energy. The state was fourth in the nation in conventional hydroelectric power generation, down from second in 2019, in part because of drought and increased water demand.
- In 2021, California was the fourth-largest electricity producer in the nation, but the state was also the nation's second-largest consumer of electricity, and in 2020, it received about 30% of its electricity supply from generating facilities outside of California, including imports from Mexico.

As indicated below, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

TABLE 2-1: TOTAL ELECRICITY SYSTEM POWER (CALIFORNIA 2021)

Fuel Type	California In-State Generation (GWh)	% of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	% of Imports	Total California Energy Mix	Total California Power Mix
Coal	303	0.2%	181	7,788	7,969	9.5%	8,272	3.0%
Natural Gas	97,431	50.2%	45	7,880	7,925	9.5%	105,356	379.0%
Oil	37	0.0%	-	-	-	0.0%	37	0.0%
Other (Waste Heat/Petroleum Coke)	382	0.2%	68	15	83	0.1%	465	0.2%
Nuclear	16,477	8.5%	524	8,756	9,281	11.1%	25,758	9.3%
Large Hydro	12,036	6.2%	12,042	1,578	13,620	16.3%	25,656	9.2%
Unspecified	-	0.0%	8,156	10,731	18,887	22.6%	18,887	6.8%
Total Thermal and Non-Renewables	**126,666**	**65.2%**	**21,017**	**36,748**	**57,764**	**6910.0%**	**184,431**	**66.4%**
Biomass	5,381	2.8%	864	26	890	1.1%	6,271	2.3%
Geothermal	11,116	5.7%	192	1,906	2,098	2.5%	13,214	4.8%
Small Hydro	2,531	1.3%	304	1	304	0.4%	2,835	1.0%
Solar	33,260	17.1%	220	5,979	6,199	7.4%	39,458	14.2%
Wind	15,173	7.8%	9,976	6,405	16,381	19.6%	31,555	11.4%
Total Renewables	**67,461**	**34.8%**	**11,555**	**14,317**	**25,872**	**3090.0%**	**93,333**	**33.6%**
SYSTEM TOTALS	***194,127***	***100.0%***	***32,572***	***51,064***	***83,636***	***100.0%***	***277,764***	***100.0%***

Source: CECs 2021 Total System Electric Generation

2.2 ELECTRICITY

The usage associated with electricity use were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies revealed the extent to which the South California Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts (10). Similarly, the subsequent 2022 IEPR provides information and policy recommendations on advancing a clean, reliable, and affordable energy system.

Electricity is currently provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2020 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (11).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator (ISO) is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (12).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Tables 2-2 identifies SCE's specific proportional shares of electricity sources in 2021. As indicated in Table 2-2, the 2021 SCE Power Mix has renewable energy at 31.4% of the overall energy resources. Geothermal resources are at 5.7%, wind power is at 10.2%, large hydroelectric sources are at 2.3%, solar energy is at 14.9%, and coal is at 0% (13).

TABLE 2-2: SCE 2021 POWER CONTENT MIX

Energy Resources	2021 SCE Power Mix
Eligible Renewable	**31.4%**
Biomass & Waste	0.1%
Geothermal	5.7%
Eligible Hydroelectric	0.5%
Solar	14.9%
Wind	10.2%
Coal	**0.0%**
Large Hydroelectric	**2.3%**
Natural Gas	**22.3%**
Nuclear	**9.2%**
Other	**0.2%**
Unspecified Sources of power*	34.6%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas*

customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild

Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the

backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California." (14)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California (15), and those vehicles consume an estimated 17.2 billion gallons of fuel each year[1]. Gasoline (and other vehicle fuels) are

[1] Fuel consumptions estimated utilizing information from EMFAC2021.

commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles (15). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 10% of the nation's total consumption. The state is the largest U.S. consumer of motor gasoline and jet fuel, and 85% of the petroleum consumed in California is used in the transportation sector (16).

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2019, about 37% of the natural gas delivered to consumers went to the state's industrial sector, and about 28% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the state's utility-scale electricity generation in 2019. The residential sector, where two-thirds of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1% (16).

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

3.1 FEDERAL REGULATIONS

3.1.1 INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

3.1.2 THE TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

3.2 CALIFORNIA REGULATIONS

3.2.1 INTEGRATED ENERGY POLICY REPORT (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2022 IEPR was adopted February 2023, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2022 IEPR introduces a new

framework for embedding equity and environmental justice at the CEC and the California Energy Planning Library which allows for easier access to energy data and analytics for a wide range of users. Additionally, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition and distributed energy resources are topics discussed within the 2022 IEPR (17).

3.2.2 STATE OF CALIFORNIA ENERGY PLAN

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

3.2.3 CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2022 version of Title 24 was adopted by the CEC and will be effective on January 1, 2023. The 2022 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings.

The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (18). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (19):

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).

- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

3.2.4 AB 1493 PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

3.2.5 CALIFORNIA'S RENEWABLE PORTFOLIO STANDARD (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020 (20).

3.2.6 CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.

- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

3.2.7 100 PERCENT CLEAN ENERGY ACT OF 2018 (SB 100)

In September 2018, the legislature approved, and the Governor signed SB 100, which builds on the targets established in SB 1078 and SB 350. Most notably, SB 100 sets a goal of powering all retail electricity sold in California with renewable and zero-carbon resources. Additionally, SB 100 updates the interim renewables target from 50% to 60% by 2030.

3.2.8 EXECUTIVE ORDER N-79-20 AND ADVANCED CLEAN CARS II

On August 25, 2022 CARB approved the Advanced Clean Cars II rule, which codifies the goals set out in Executive Order N-79-20 and establishes a year-by-year roadmap such that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles. Under this regulation, automakers are required to accelerate deliveries of zero-emission light-duty vehicles, beginning with model year 2026. CARB estimates that between 2026 and 2040, the regulation would reduce GHG emissions by a cumulative 395 million metric tons, equivalent to reducing petroleum use by 915 million barrels.

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

Per Appendix F of the *State CEQA Guidelines* (21), states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
- Increasing reliance on renewable energy sources.

In compliance with Appendix G of the *State CEQA Guidelines* (22), this report analyzes the project's anticipated energy use during construction and operations to determine if the Project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.2 METHODOLOGY

Information from the CalEEMod Version 2022.1 outputs for the *Racoon Avenue Air Quality Impact Analysis* (AQIA) (23) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands.

CONSTRUCTION DURATION

Construction is anticipated to begin in January 2024 and will last through August 2024 (23). The construction schedule utilized in the analysis, shown in Table 4-1, represents a "worst-case" analysis scenario. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (24).

CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-2 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code. The equipment list is generally based on CalEEMod default parameters and confirmed with the Project Applicant.

TABLE 4-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	1/1/2024	1/8/2024	6
Grading	1/9/2024	1/29/2024	15
Building Construction	1/30/2024	8/30/2024	154
Paving	8/16/2024	8/30/2024	11
Architectural Coating	8/16/2024	8/30/2024	11

Source: Appendix 4.1.

TABLE 4-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment[1]	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes during the site preparation and grading phases.

4.2.1 CALEEMOD

In May 2022 the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including the SCAQMD, released the latest version of CalEEMod, version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage (25). Accordingly, the latest version of CalEEMod has been used to determine the proposed

Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendices 4.1.

4.2.2 EMISSION FACTORS MODEL

On May 2, 2022, the EPA approved the 2021 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (26). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of the analysis, the 2024 analysis year was utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Outputs from the EMFAC2021 model runs are provided in Appendix 4.2.

4.3 CONSTRUCTION ENERGY DEMANDS

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

4.3.1 CONSTRUCTION POWER COST

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

PROJECT CONSTRUCTION POWER COST

The *2023 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.50, which was used to calculate the Project's total construction power cost (27).

As shown on Table 4-3, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately $50,311.80.

TABLE 4-3: CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 SF)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
Parking Lot	$2.50	2,874.96	7	$50,311.80
			CONSTRUCTION POWER COST	***$50,311.80***

4.3.2 CONSTRUCTION ELECTRICITY USAGE

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-3) by the utility provider cost per kilowatt hour (kWh) of electricity.

PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule was used to determine the Project's electrical usage. As of March 1, 2023, SCE's general service rate is $0.13 per kilowatt hours (kWh) of electricity for industrial services (28). As shown on Table 4-4, the total electricity usage from on-site Project construction related activities is estimated to be approximately 387,014 kWh.

TABLE 4-4: CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
Parking Lot	$0.13	387,014
CONSTRUCTION ELECTRICITY USAGE		***387,014***

4.3.3 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

PROJECT CONSTRUCTION EQUIPMENT FUEL CONSUMPTION

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (29). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region[2]. As presented in Table 4-5, Project construction activities would consume an estimated 25,552 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

[2] Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Activity/Duration	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Site Preparation	6	Rubber Tired Dozers	367	3	8	0.4	3,523	1,143
		Crawler Tractors	87	4	8	0.37	1,030	334
Grading	15	Excavators	36	2	8	0.38	219	177
		Graders	148	1	8	0.41	485	394
		Rubber Tired Dozers	367	1	8	0.4	1,174	952
		Scrapers	423	2	8	0.48	3,249	2,634
		Crawler Tractors	84	2	8	0.37	497	403
Building Construction	154	Cranes	367	1	8	0.29	851	7,088
		Forklifts	82	3	8	0.2	394	3,276
		Generator Sets	14	1	8	0.74	83	690
		Tractors/Loaders/Backhoes	84	3	8	0.37	746	6,209
		Welders	46	1	8	0.45	166	1,379
Paving	11	Pavers	81	2	8	0.42	544	324
		Paving Equipment	89	2	8	0.36	513	305
		Rollers	36	2	8	0.38	219	130
Architectural Coating	11	Air Compressors	37	1	8	0.48	142	84
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								***25,522***

4.3.3 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 4-6.

TABLE 4-6: CONSTRUCTION TRIPS AND VMT

Phase Name	Worker Trips / Day	Vendor Trips / Day	Hauling Trips / Day	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Site Preparation	18	0	0	18.5	10.2	20
Grading	20	0	22	18.5	10.2	20
Building Construction	0	0	0	18.5	10.2	20
Paving	15	0	0	18.5	10.2	20
Architectural Coating	0	0	0	18.5	10.2	20

4.3.4 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 10,915 VMT during the 7 months of construction (23). Based on CalEEMod methodology, it is assumed that 50% of all worker trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1[3]), and 25% are from light-duty-trucks (LDT2[4]). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (26). EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the San Bernardino (MD) sub-area for the 2024 calendar year. Data from EMFAC2021 is shown in Appendix 4.2.

Table 4-7 provides an estimated annual fuel consumption resulting from Project construction worker trips. Based on Table 4-7, it is estimated that 401 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

[3] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[4] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES (LDA)

Construction Activity	Duration (Days)	Worker LDA Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2024						
LDA						
Site Preparation	6	9	18.5	999	31.22	32
Grading	15	10	18.5	2,775	31.22	89
Paving	11	8	18.5	1,628	31.22	52
LDT1						
Site Preparation	6	5	18.5	555	24.20	23
Grading	15	5	18.5	1,388	24.20	57
Paving	11	4	18.5	814	24.20	34
LDT2						
Site Preparation	6	5	18.5	555	24.10	23
Grading	15	5	18.5	1,388	24.10	58
Paving	11	4	18.5	814	24.10	34
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION						***401***

It should be noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

4.3.5 CONSTRUCTION VENDOR/HAULING FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 6,600 VMT along area roadways for the Project over the duration of construction activity (23). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHDT), 50% of vendor trips are from heavy-heavy duty trucks (HHDT), and 100% of all hauling trips are from HHDTs. These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (23). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHDT and HHDT vehicle classes within the San Bernardino (MD) sub-area for the 2024 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

Based on Table 4-8, it is estimated that 1,065 gallons of fuel will be consumed related to construction hauling trips during full construction of the Project.

TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES

Construction Activity	Duration (Days)	Worker LDA Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2024						
Hauling HHDT						
Grading	15	22	20	6,600	6.19	1,065
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION						***1,065***

It should be noted that Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

4.3.6 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that there are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

Construction contractors would be required to comply with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to

five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by passenger car and truck vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 TRANSPORTATION ENERGY DEMANDS

PROPOSED PROJECT TRANSPORTATION ENERGY DEMANDS

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class can be determined by evaluated in the vehicle fleet mix and the total VMT.

As with worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (26). EMFAC2021 was run for the San Bernardino (MD) sub-area for calendar year 2024. Data from EMFAC2021 is shown in Appendix 4.2.

The estimated transportation energy demands are summarized on Tables 4-9. It should be noted that the existing development demands were subtracted from the Project demands to determine the net transportation energy demands from the proposed Project. As summarized on Table 4-9 the Project will result in a net increase of 308,543 annual VMT and an estimated annual fuel consumption of 13,228 gallons of fuel.

TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION

Vehicle Type	Annual Miles Traveled[1]	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
LDA	150,150	31.22	4,810
LDT1	14,154	24.20	585
LDT2	63,242	24.10	2,624
MDV	48,905	19.43	2,517
LHDT1	10,918	15.69	696
LHDT2	2,922	15.24	192
MHDT	1,641	7.48	219
HHDT	5,879	6.19	949
OBUS	156	5.45	29
UBUS	73	4.09	18
MCY	8,204	40.86	201

Vehicle Type	Annual Miles Traveled[1]	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
SBUS	327	8.01	41
MH	1,973	5.67	348
TOTAL (ALL VEHICLES)	***308,543***		***13,228***

[1] Total VMT may not match CalEEMod output due to rounding.

4.4.2 ENERGY DEMANDS

PROJECT FACILITY ENERGY DEMANDS

Project building operations activities would result in the consumption of electricity, which would be supplied to the Project by SCE. It should be noted that there is no natural gas usage associated with the proposed land use. As previously stated, the analysis herein assumes compliance with the 2022 Title 24 and CALGreen standards. Annual electricity demands of the Project are summarized in Table 4-10 and provided in Appendix 4.1.

TABLE 4-10: PROJECT ANNUAL OPERATIONAL NATURAL GAS DEMAND SUMMARY

Land Use	Electricity Demand (kWh/year)
Parking Lot	2,518,465
TOTAL PROJECT ENERGY DEMAND	***2,518,465***

kBTU – kilo-British Thermal Units

4.4.3 OPERATIONAL ENERGY EFFICIENCY/CONSERVATION MEASURES

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title 24, California Green Building Standards Code).

ENHANCED VEHICLE FUEL EFFICIENCIES

Project annual fuel consumption estimates presented previously in Table 4-9 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands.

4.5 SUMMARY

4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately $50,311.80. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 387,014 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 25,522 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 401 gallons of fuel. Additionally, fuel consumption from construction hauling trips will total approximately 1,065 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiency and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2022 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (17). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 OPERATIONAL ENERGY DEMANDS

TRANSPORTATION ENERGY DEMANDS

Annual vehicular trips and related VMT generated by the operation of the Project would result in a net fuel demand of 13,228 gallons of fuel.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other commercial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Ed., 2021); and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to similar uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. The location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

FACILITY ENERGY DEMANDS

Project facility operational energy demands are estimated to result in 2,518,465 kWh/year for electricity and would be supplied by SCE. The Project proposes conventional commercial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other commercial uses of similar scale and configuration.

Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSIONS

5.1 ENERGY IMPACT 1

Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful, or unnecessary consumption of energy. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

5.2 ENERGY IMPACT 2

Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The Project's consistency with the applicable state and local plans is discussed below.

CONSISTENCY WITH ISTEA

Transportation and access to the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site.

CONSISTENCY WITH TEA-21

The Project site is located in an area with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.

CONSISTENCY WITH IEPR

Electricity would be provided to the Project by SCE. SCE's *Clean Power and Electrification Pathway* (CPEP) white paper builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation of the goals presented in the 2022 IEPR.

Additionally, the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, development of the proposed Project would support the goals presented in the 2022 IEPR.

CONSISTENCY WITH STATE OF CALIFORNIA ENERGY PLAN

The Project site is located in an area with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

The 2022 version of Title 24 was adopted by the CEC and was effective on January 1, 2023. As the Project building construction is anticipated in 2024, the Project would be required to comply with the Title 24 standards in place at that time. Therefore, the Project would not result in a significant impact on energy resources (30). The proposed Project would be subject to Title 24 standards.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 11, CALGREEN

As previously stated, CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that were published on July 1, 2022 and will become effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made.

CONSISTENCY WITH AB 1493

AB 1493 is not applicable to the Project as it is a statewide measure establishing vehicle emissions standards. No feature of the Project would interfere with implementation of the requirements under AB 1493.

CONSISTENCY WITH RPS

California's RPS is not applicable to the Project as it is a statewide measure that establishes a renewable energy mix. No feature of the Project would interfere with implementation of the requirements under RPS.

CONSISTENCY WITH SB 350 AND SB 100

The proposed Project would use energy from SCE, which have committed to diversify their portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350 and SB 100. Additionally, the Project would be designed and constructed to implement the energy efficiency measures for new commercial developments and would include several measures designed to reduce energy consumption in accordance with Title 24.

As shown above, the Project would not conflict with any of the state or local plans. As such, a less than significant impact is expected.

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7 CERTIFICATIONS

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Racoon Avenue. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 4.1:

PROJECT CALEEMOD EMISSIONS MODEL OUTPUTS

15178 - Racoon Ave Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	15178 - Racoon Ave
Construction Start Date	1/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.542422, -117.444046
County	San Bernardino-Mojave Desert
City	Adelanto
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5104
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.12

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Parking Lot	66.0	Acre	66.0	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.88	90.8	21.3	27.1	0.04	0.97	0.20	1.17	0.89	0.05	0.94	—	4,544	4,544	0.18	0.04	0.87	4,562
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.90	4.04	59.7	36.8	0.20	1.85	8.49	10.3	1.74	2.74	4.21	—	28,124	28,124	0.30	3.41	1.20	29,147
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.97	3.47	8.46	8.46	0.02	0.34	0.45	0.79	0.32	0.15	0.46	—	2,413	2,413	0.06	0.15	0.84	2,461
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.63	1.54	1.54	< 0.005	0.06	0.08	0.14	0.06	0.03	0.08	—	400	400	0.01	0.02	0.14	407

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.88	90.8	21.3	27.1	0.04	0.97	0.20	1.17	0.89	0.05	0.94	—	4,544	4,544	0.18	0.04	0.87	4,562
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.90	4.04	59.7	36.8	0.20	1.85	8.49	10.3	1.74	2.74	4.21	—	28,124	28,124	0.30	3.41	1.20	29,147
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.97	3.47	8.46	8.46	0.02	0.34	0.45	0.79	0.32	0.15	0.46	—	2,413	2,413	0.06	0.15	0.84	2,461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.18	0.63	1.54	1.54	< 0.005	0.06	0.08	0.14	0.06	0.03	0.08	—	400	400	0.01	0.02	0.14	407

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	0.67	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,149	3,149	0.25	0.06	2.99	3,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.64	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,083	3,083	0.25	0.06	0.08	3,106
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.65	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,098	3,098	0.25	0.06	1.29	3,123
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.12	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.00	513	513	0.04	0.01	0.21	517

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Area	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.25	0.67	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,149	3,149	0.25	0.06	2.99	3,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Area	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.64	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,083	3,083	0.25	0.06	0.08	3,106
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	0.20	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	692	692	0.02	0.03	1.29	703
Area	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.65	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,098	3,098	0.25	0.06	1.29	3,123

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116
Area	0.00	0.08	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	398	398	0.04	< 0.005	—	401
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.12	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.00	513	513	0.04	0.01	0.21	517

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.06	0.59	0.54	< 0.005	0.03	—	0.03	0.02	—	0.02	—	87.1	87.1	< 0.005	< 0.005	—	87.4
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.91	3.91	< 0.005	< 0.005	0.01	3.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	2.71	2.71	—	0.99	0.99	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.41	1.24	< 0.005	0.06	—	0.06	0.05	—	0.05	—	271	271	0.01	< 0.005	—	272
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.26	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.9	44.9	< 0.005	< 0.005	—	45.0
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	0.03	267
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.60	0.42	25.3	5.39	0.14	0.40	5.52	5.92	0.40	1.41	1.82	—	21,262	21,262	0.02	3.34	1.17	22,259
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.02	1.04	0.22	0.01	0.02	0.23	0.24	0.02	0.06	0.07	—	873	873	< 0.005	0.14	0.80	915
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.19	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	145	145	< 0.005	0.02	0.13	151

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	5.13	6.00	0.01	0.23	—	0.23	0.21	—	0.21	—	1,110	1,110	0.05	0.01	—	1,114
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.94	1.10	< 0.005	0.04	—	0.04	0.04	—	0.04	—	184	184	0.01	< 0.005	—	184
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	15.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.6	45.6	< 0.005	< 0.005	—	45.7
Paving	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.54	7.54	< 0.005	< 0.005	—	7.57
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.08	1.35	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	224	224	0.01	0.01	0.87	227
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.14	6.14	< 0.005	< 0.005	0.01	6.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.02	1.02	< 0.005	< 0.005	< 0.005	1.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	72.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.37	5.37	< 0.005	< 0.005	—	5.38
Architectural Coatings	—	2.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.89	0.89	< 0.005	< 0.005	—	0.89
Architectural Coatings	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Total	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Total	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116
Total	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	398	398	0.04	< 0.005	—	401
Total	—	—	—	—	—	—	—	—	—	—	—	—	398	398	0.04	< 0.005	—	401

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.08	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/1/2024	1/8/2024	5.00	6.00	40
Grading	Grading	1/9/2024	1/29/2024	5.00	15.0	110
Building Construction	Building Construction	1/30/2024	8/30/2024	5.00	154	1110
Paving	Paving	8/16/2024	8/30/2024	5.00	11.0	75
Architectural Coating	Architectural Coating	8/16/2024	8/30/2024	5.00	11.0	75

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	305	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	0.00	172,498

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	21.0	0.00	—
Grading	—	36,600	60.0	0.00	—
Paving	0.00	0.00	0.00	0.00	66.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Parking Lot	66.0	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Parking Lot	30.0	30.0	30.0	10,961	845	845	845	308,543

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	172,498

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Parking Lot	2,518,465	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.2	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	9.25	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.6

AQ-PM	6.97
AQ-DPM	3.24
Drinking Water	60.3
Lead Risk Housing	43.3
Pesticides	43.5
Toxic Releases	26.0
Traffic	5.26
Effect Indicators	—
CleanUp Sites	88.3
Groundwater	71.8
Haz Waste Facilities/Generators	94.4
Impaired Water Bodies	51.2
Solid Waste	72.4
Sensitive Population	—
Asthma	88.1
Cardio-vascular	99.6
Low Birth Weights	64.2
Socioeconomic Factor Indicators	—
Education	84.8
Housing	77.6
Linguistic	69.8
Poverty	93.2
Unemployment	88.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	5.838573078
Employed	0.179648402
Median HI	1.424355191
Education	—
Bachelor's or higher	10.07314256
High school enrollment	100
Preschool enrollment	10.97138458
Transportation	—
Auto Access	34.2871808
Active commuting	2.399589375
Social	—
2-parent households	21.86577698
Voting	16.77146157
Neighborhood	—
Alcohol availability	93.53265751
Park access	6.877967407
Retail density	4.504042089
Supermarket access	2.399589375
Tree canopy	0.089824201
Housing	—
Homeownership	43.48774541
Housing habitability	26.22866675
Low-inc homeowner severe housing cost burden	67.79160785
Low-inc renter severe housing cost burden	0.295136661
Uncrowded housing	44.92493263
Health Outcomes	—

Insured adults	12.17759528
Arthritis	2.7
Asthma ER Admissions	7.4
High Blood Pressure	6.0
Cancer (excluding skin)	32.7
Asthma	1.7
Coronary Heart Disease	2.7
Chronic Obstructive Pulmonary Disease	0.4
Diagnosed Diabetes	6.3
Life Expectancy at Birth	15.8
Cognitively Disabled	24.2
Physically Disabled	71.5
Heart Attack ER Admissions	1.0
Mental Health Not Good	3.8
Chronic Kidney Disease	5.2
Obesity	15.0
Pedestrian Injuries	19.6
Physical Health Not Good	2.6
Stroke	3.3
Health Risk Behaviors	—
Binge Drinking	73.8
Current Smoker	0.7
No Leisure Time for Physical Activity	11.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	19.0

Elderly	85.6
English Speaking	37.4
Foreign-born	40.5
Outdoor Workers	7.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.7
Traffic Density	5.6
Traffic Access	23.0
Other Indices	—
Hardship	87.5
Other Decision Support	—
2016 Voting	26.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	89.0
Healthy Places Index Score for Project Location (b)	1.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data Building, Paving, and Architectural Coating overlap to present a conservative analysis Construction schedule compressed to account for 2024 Opening Year
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Operations: Vehicle Data	Trip characteristics based on information from the Trip Analysis

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APPENDIX 4.2:

EMFAC2021

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (MD)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calenc	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Fuel Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Gasoline	2.67371537	179.0665221	303.88987	0	124.69491	0.047227051	47.22705145	431524.1776	179.0665221	2672982.086	6.19	HHDT
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Diesel	12941.95694	2664602.465	1950611.5	0	237189.49	431.0654074	431065.4074		2664602.465			
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Electricity	35.13402513	5737.248237	0	11894.936	1423.9999	0	0		5737.248237			
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Natural Gas	34.45532984	2463.306139	52093.157	0	6789.8453	0.411543149	411.5431489		2463.306139			
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Gasoline	309548.7892	12857053.58	20373766	0	2183259.5	440.1966248	440196.6248	447331.193	12857053.58	13965428.57	31.22	LDA
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Diesel	1034.982141	34051.71651	49996.021	0	6008.5021	0.824103926	824.103926		34051.71651			
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Electricity	13623.83126	668545.7008	0	1153396.9	118930.44	0	0		668545.7008			
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Plug-in Hybric	8183.169851	405777.5733	341051.68	363781.16	58250.704	6.310464316	6310.464316		405777.5733			
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Gasoline	31233.77168	1048128.245	1499609.6	0	172787.76	43.45105088	43451.05088	43486.19277	1048128.245	1052389.791	24.20	LDT1
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Diesel	15.99626011	215.2408333	298.17289	0	45.895761	0.009170376	9.170375651		215.2408333			
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Electricity	48.63773853	2207.053268	0	4089.4754	421.30821	0	0		2207.053268			
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Plug-in Hybric	34.41015177	1839.251886	1856.4427	2424.2053	315.04708	0.025971515	25.97151479		1839.251886			
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Gasoline	137725.5016	5643211.721	8973974	0	947238.81	237.0500862	237050.0862	238447.9934	5643211.721	5745847.212	24.10	LDT2
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Diesel	435.2924741	19152.63273	30519.428	0	3118.2586	0.59798519	597.9851905		19152.63273			
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Electricity	786.4209618	29403.79568	0	58637.73	8444.2936	0	0		29403.79568			
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Plug-in Hybric	1052.1882	54079.0621	47820.906	57472.539	8118.1902	0.799922079	799.922079		54079.0621			
San Bernardino (MD)	2024	LHDT1	Aggregate	Aggregate	Gasoline	13065.12456	480544.6519	652458.21	0	262189.38	36.82043144	36820.43144	56877.26029	480544.6519	892607.9514	15.69	LHDT1
San Bernardino (MD)	2024	LHDT1	Aggregate	Aggregate	Diesel	11067.90041	409320.0985	549831.83	0	189631.99	20.05682885	20056.82885		409320.0985			
San Bernardino (MD)	2024	LHDT1	Aggregate	Aggregate	Electricity	35.57307835	2743.201006	0	10260.663	2094.4871	0	0		2743.201006			
San Bernardino (MD)	2024	LHDT2	Aggregate	Aggregate	Gasoline	1727.120361	62917.63426	88408.902	0	36684.654	5.382965998	5382.965998	16041.7624	62917.63426	244483.5133	15.24	LHDT2
San Bernardino (MD)	2024	LHDT2	Aggregate	Aggregate	Diesel	4731.795472	180893.1491	250292.83	0	85792.628	10.6587964	10658.7964		180893.1491			
San Bernardino (MD)	2024	LHDT2	Aggregate	Aggregate	Electricity	9.20742508	672.7299431	0	2488.3075	506.32316	0	0		672.7299431			
San Bernardino (MD)	2024	MCY	Aggregate	Aggregate	Gasoline	18161.87327	104842.2951	138549.79	0	48010.928	2.566095645	2566.095645	2566.095645	104842.2951	104842.2951	40.86	MCY
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Gasoline	104992.7033	4103194.432	6448292.7	0	723018.64	214.6505054	214650.5054	218155.5699	4103194.432	4237999.5	19.43	MDV
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Diesel	1714.88073	69248.41239	99526.126	0	11179.07	2.991593915	2991.593915		69248.41239			
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Electricity	866.9961777	32393.89091	0	64565.598	9311.7129	0	0		32393.89091			
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Plug-in Hybric	687.4700368	33162.76439	30858.79	35189.353	5476.8252	0.513470573	513.470573		33162.76439			
San Bernardino (MD)	2024	MH	Aggregate	Aggregate	Gasoline	3091.371633	26724.2653	38795.292	0	451.02709	5.605041279	5605.041279	6656.655531	26724.2653	37736.37285	5.67	MH
San Bernardino (MD)	2024	MH	Aggregate	Aggregate	Diesel	1276.896684	11012.10756	17019.874	0	201.50812	1.051614251	1051.614251		11012.10756			
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Gasoline	898.6661288	63890.69959	49718.983	0	24401.108	12.44579031	12445.79031	30031.31509	63890.69959	224542.5252	7.48	MHDT
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Diesel	2714.454563	159428.8117	571359.1	0	157106.46	17.54186171	17541.86171		159428.8117			
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Electricity	10.1031131	832.4896331	0	6143.9191	1476.0162	0	0		832.4896331			
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Natural Gas	8.401730183	390.5243176	7896.1484	0	1496.1507	0.043663079	43.66307868		390.5243176			
San Bernardino (MD)	2024	OBUS	Aggregate	Aggregate	Gasoline	271.7824577	16376.9448	12151.283	0	7253.1058	3.255024528	3255.024528	3935.151344	16376.9448	21439.92288	5.45	OBUS
San Bernardino (MD)	2024	OBUS	Aggregate	Aggregate	Diesel	72.39768455	4993.524222	15183.68	0	2552.2277	0.680126817	680.1268166		4993.524222			
San Bernardino (MD)	2024	OBUS	Aggregate	Aggregate	Electricity	0.546180409	69.45385865	0	134.26172	40.450061	0	0		69.45385865			
San Bernardino (MD)	2024	SBUS	Aggregate	Aggregate	Gasoline	96.21442986	6087.08589	16859.595	0	1704.8269	0.660941658	660.941658	2594.806548	6087.08589	20791.50655	8.01	SBUS
San Bernardino (MD)	2024	SBUS	Aggregate	Aggregate	Diesel	625.5915659	14655.09273	9931.139	0	7006.8201	1.93386489	1933.86489		14655.09273			
San Bernardino (MD)	2024	SBUS	Aggregate	Aggregate	Electricity	1.465134098	49.32793183	0	143.15878	65.395323	0	0		49.32793183			
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Gasoline	55.17381074	5264.991755	18545.859	0	585.98392	1.390338076	1390.338076	4704.95373	5264.991755	19259.83007	4.09	UBUS
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Diesel	2.531039845	250.3343972	30.109711	0	1.2469352	0.03157511	31.57511024		250.3343972			
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Electricity	0.196662013	20.74124617	0	33.75781	0.8370585	0	0		20.74124617			
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Natural Gas	103.8995189	13723.76268	31122.272	0	1010.1672	3.283040544	3283.040544		13723.76268			

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APPENDIX F
Preliminary Soils Investigation APNs 3128-341-01, -02, -04, and -06 Adelanto, California

LOR GEOTECHNICAL GROUP, INC.
Soil Engineering ▲ Geology ▲ Environmental

PRELIMINARY SOILS AND INFILTRATION/PERCOLATION FEASIBILITY INVESTIGATION
APNs 3128-341-01, -02, -04, and -06
ADELANTO, CALIFORNIA

PROJECT NO. 23863.1
OCTOBER 26, 2022

Prepared For:

VALFAIR Construction
501 E. US Highway 80
Forney, Texas 75126

Attention: Mr. Craig Gardner

LOR GEOTECHNICAL GROUP, INC.
Soil Engineering ▲ Geology ▲ Environmental

October 26, 2022

VALFAIR Construction
501 E. US Highway 80
Forney, Texas 75126

Project No. 23863.1

Attention: Mr. Craig Gardner

Subject: Preliminary Soils and Infiltration/Percolation Feasibility Investigation, APNs 3128-41-01, -02, -04, and -06, Adelanto, California.

LOR Geotechnical Group, Inc., is pleased to present this report summarizing our soils investigation for the subject project. This report was based upon a scope of services generally outlined in our Proposal, dated September 6, 2022, and other written and verbal communications with you. In summary, it is our opinion that the site can be developed from a geotechnical perspective, provided the recommendations presented in the attached report are incorporated into design and construction. The following executive summary reviews some of the important elements of the project. However, this summary should not be solely relied upon.

It is our opinion that the existing upper, loose alluvial soils will not provide uniform and/or adequate support for the proposed fill rock ballast, gravel over aggregate base or similar surfaces. Therefore, we recommend that these soils be moisture conditioned and properly compacted within the upper 12 inches. If development changes, this firm should be notified so that we can provide additional recommendations, as appropriate.

The near surface soils were found to have a very low expansion index, negligible sulfate content, and good R-value. At or near the completion of site grading, subgrade soils should be sampled and tested to verify their expansion potential and soluble sulfate content, as necessary.

LOR Geotechnical Group, Inc.

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INTRODUCTION

During October of 2022, a Preliminary Soil Investigation was performed by LOR Geotechnical Group, Inc., for the proposed Copart 66 facility, APNs 3128-341-01, -02, -04, and -06, Adelanto, California. The purpose of this investigation was to provide a technical evaluation of the earth units of the site and to provide soil engineering design recommendations for the proposed development. The scope of our services included: 1) Review of available data; 2) A subsurface field investigation; 3) Laboratory testing of selected soil samples obtained during the field investigation; 4) Infiltration/percolation testing; 5) Development of soil engineering recommendations for site grading and design and infiltration/percolation characteristics for storm water capture; and 6) Preparation of this report summarizing our findings, and providing conclusions and recommendations for site development.

The approximate location of the site is shown on the attached Index Map, Enclosure A-1 within Appendix A.

To orient our investigation at the site, an aerial photograph image was provided for our use. This map illustrates the site boundaries and requested infiltration tests locations and depths and was utilized as a base map for our Site Plan, Enclosure A-2 within Appendix A.

PROJECT CONSIDERATIONS

As based upon information provided by you, the site is proposed to be developed for auto parking. The proposed surface is to be rock ballast, gravel over aggregate base, or similar. No structures are proposed at this time. Infiltration in the form of three open basins located in the northern portion of the site (along the south side of Holly Road) are proposed. The depth of proposed basins, approximately 5 feet, was provided by your design team. In addition, dry wells may be proposed to facilitate the infiltration of the shallow basins.

EXISTING SITE CONDITIONS

The subject site consists of a vacant, 65-acres of land located along the southeast corner of Holly Road and Calendula Road, in the city of Adelanto, California. A power line easement traverses through the eastern site from the north-northwest to the south-southeast. The site is relatively planar with a gentle fall towards the north. Site vegetation consists of a light to moderate growth of native plants, trees, and brush.

Holly Road, a dirt roadway, bounds the site on the north with vacant, desert land beyond. Vacant, desert land bounds the site on the east. Calendula Road, a dirt roadway, bounds the site on the east with vacant desert land beyond. Cactus Road, a dirt roadway, bounds the site on the south, with vacant desert land beyond.

SUBSURFACE FIELD INVESTIGATION

Our subsurface field exploration program was conducted on October 11 through 13, 2022 and consisted of drilling 20 exploratory borings and 5 percolation test borings with a truck-mounted Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The borings were advanced to depths ranging from approximately 11 to 50 feet below the existing ground surface. The approximate locations of our exploratory borings and percolation tests are presented on the attached Site Plan, Enclosure A-2 within Appendix A.

The subsurface conditions encountered in the exploratory borings were logged by a geologist from this firm. Relatively undisturbed and bulk samples were obtained and returned to our geotechnical laboratory in sealed containers for further testing and evaluation. A detailed description of the field exploration program and the boring logs are presented within Appendix B.

LABORATORY TESTING PROGRAM

The selected samples obtained during the field investigation were subjected to our geotechnical laboratory testing to evaluate the general physical and engineering properties. Laboratory testing included in-place moisture content and dry density, laboratory compaction characteristics, direct shear, sieve analysis, sand equivalent, R-value, and soluble sulfate content. A detailed description of the laboratory testing program and the test results are presented in Appendix C.

INFILTRATION/PERCOLATION TESTING AND TEST RESULTS

Three borehole infiltration tests were conducted in general accordance with the Shallow Percolation Test procedure as outlined in the Technical Guidance Document for Water Quality Management Plans (CDM Smith, 2013). The general locations of our testing as requested, is illustrated on Enclosure 2. Test borings were drilled to depths of approximately 5 feet, as requested, below the existing ground surface on October 11, 2022. Subsequent to drilling, a 3-inch diameter, perforated PVC pipe wrapped in filter

fabric was placed within each test hole and 3/4-inch gravel was placed between the outside of the pipe and the hole wall. Test holes were pre-soaked the same day as drilling. Testing took place the next day, October 12, 2022, within 26 hours but not before 15 hours, of the pre-soak. The holes were filled using water from a 200 gallon water tank. Test periods consisted of allowing the water to drop in 10-minute intervals. After each reading, the hole was refilled. Testing was terminated after a total of 8 readings were recorded.

Infiltration test results are summarized in the following table:

Test No.	Depth*	Infiltration Rate** (in/hr)
P-1	5.0	5.77
P-2	5.0	6.92
P-3	5.0	0.46

* depth measured below existing ground surface
** Porchet Method determined rate

The results of this testing are presented as Enclosures D-1 through D-3.

Two falling head percolation tests were conducted. Immediately after drilling the test holes on October 11, 2022, a 3-inch diameter perforated plastic pipe wrapped with filter fabric was inserted to the total depths drilled of 50 and 40 feet. The annular space between the pipe and the boring wall was filed with 3/4-inch gravel. The void ratio for the gravel used was tested in our laboratory in general accordance with ASTM C29. The results of this test are provided on Enclosure 6. The depth of the boreholes were measured prior to and upon the completion of testing. Test holes were pre-soaked the day prior to testing, October 12, 2022. Testing consisted of filling the test holes to approximately 5 to 6 feet below the existing ground (the proposed bottom of the basin) and the drop in water was measured in 10-minute intervals, refilling after every 10-minutes, for a total of 8 readings.

Percolation test results are summarized in the following table:

Test No.	Depth*	Percolation Rate** (gal/sf/day)
P-4	50	31.4
P-5	40	26.1

* depth measured below existing ground surface
** average of final four readings

The test results are provided on the attached Falling Head Percolation Test Results, Enclosures D-4 and D-5.

SUBSURFACE CONDITIONS

As encountered within our exploratory borings, alluvial soils consisting of medium dense to very dense, brown, silty sand, well graded sand, poorly graded sand, and sandy silt are present beneath the site.

Groundwater was not encountered within our exploratory borings as advanced to a maximum depth of approximately 50 feet below the existing ground surface.

Records for nearby wells which were readily available from the State of California Department of Water Resources online database were reviewed as a part of this investigation (CDWR, 2022). This database indicates that the closest well for which data was available was State Well Number: 05N06W13H001S, is located approximately 1.5 kilometers (0.9 miles) to the southwest. Only one reading was available. The groundwater elevation of that one reading was approximately 214 feet below the ground surface of 3,122 feet above mean sea level.

As illustrated on Enclosure A-2, the site elevations range from approximately 3,010 to 3,045 feet above mean sea level. Therefore, groundwater under the site is anticipated to lie in excess of 100 feet or more and does not appear to be a factor in the development of the site.

A more detailed description of the subsurface conditions as encountered within our exploratory borings is presented on the attached Boring Logs within Appendix B.

CONCLUSIONS

On the basis of our field investigation and testing program, it is the opinion of LOR Geotechnical Group, Inc., that the proposed development is feasible from a soil engineering standpoint, provided the recommendations presented in this report are incorporated into design and implemented during grading and construction.

The subsurface conditions encountered within the site are indicative of the locations explored. The subsurface conditions presented here are not to be construed as being present the same everywhere on the site. If conditions are encountered during the construction of the project which differ significantly from those presented in this report, this firm should be notified immediately so we may assess the impact to the recommendations provided.

Soil Expansiveness

Based upon observation and testing, the onsite soils are considered to have very low expansion potential (expansion index of less than 20). For very low expansive soils, no specialized construction procedures to resist expansive soil activity are necessary.

Careful evaluation of on-site soils and any import fill for their expansion potential should be conducted during the grading operation.

Sulfate Protection

The results of the soluble sulfate tests conducted on selected subgrade soils expected to be encountered at foundation levels indicate an exposure class S0 for sulfate. Therefore, no specific recommendations are given for concrete elements to be in contact with the onsite soils.

RECOMMENDATIONS

General Site Grading

It is imperative that no clearing and/or grading operations are performed without the presence of a qualified geotechnical engineer. An on-site, pre-job meeting with the developer, the contractor, the jurisdictional agency, and the geotechnical engineer should occur prior to all grading related operations. Operations undertaken at the site without the

geotechnical engineer present may result in exclusion of affected areas from the final compaction report for the project.

Grading of the subject site should be performed in accordance with the following recommendations as well as applicable portions of the California Building Code, and/or applicable local ordinances.

All areas to be graded should be stripped of significant vegetation and other deleterious materials. Such materials may not be used as engineered fill. The medium dense alluvial soils encountered during site preparation should be removed, cleaned of significant deleterious materials, and may be reused as compacted fill.

Cavities created by removal of subsurface obstructions should be thoroughly cleaned of loose soil, organic matter and other deleterious materials, shaped to provide access for construction equipment, and backfilled as recommended in the following Engineered Compacted Fill section of this report.

Preparation of Fill Areas

After clearing and grubbing, the site soils to receive fill should be processed to a depth of 12 inches, brought to near optimum moisture content, and compacted to at least 90 percent relative compaction (ASTM D 1557) prior to the placement of compacted fill.

Engineered Compacted Fill

The on-site soil materials should provide adequate quality fill material, provided they are free from significant organic matter and other deleterious materials. Unless approved by the geotechnical engineer and local governing agency, rock or similar irreducible material with a maximum dimension greater than 6 inches should not be buried or placed in fills.

Import fill should be inorganic, non-expansive granular soils free from rocks or lumps greater than 6 inches in maximum dimension. Sources for import fill should be approved by the geotechnical engineer prior to their use. Fill should be spread in maximum 8-inch uniform, loose lifts, each lift brought to near optimum moisture content, and compacted to a relative compaction of at least 90 percent in accordance with ASTM D 1557.

Based upon the relative compaction of the near surface soils determined during this investigation and the relative compaction anticipated for compacted fill soil, we estimate a compaction shrinkage factor of approximately 10 to 15 percent. Therefore, 1.10 cubic

yards to 1.15 cubic yards of in-place materials would be necessary to yield one cubic yard of properly compacted fill material. In addition, we would anticipate subsidence of approximately 0.10 feet. These values are for estimating purposes only and are exclusive of losses due to stripping or the removal of subsurface obstructions. These values may vary due to differing conditions within the project boundaries and the limitations of this investigation. Shrinkage should be monitored during construction. If percentages vary, provisions should be made to revise final grades or adjust quantities of borrow or export.

Short-Term Excavations

Following the California Occupational and Safety Health Act (CAL-OSHA) requirements, excavations 5-feet deep and greater should be sloped or shored. All excavations and shoring should conform to CAL-OSHA requirements.

Short-term excavations of 5-feet deep and greater shall conform to Title 8 of the California Code of Regulations, Construction Safety Orders, Section 1504 and 1539 through 1547. Based on our exploratory borings, it appears that Type C soils are the predominate type of soil on the project and all short-term excavations should be based on this type of soil. Deviation from the standard short-term slopes are permitted using Option 4, Design by a Registered Professional Engineer (Section 1541.1).

Short-term slope construction and maintenance are the responsibility of the contractor, and should be a consideration of his methods of operation and the actual soil conditions encountered.

Soil Expansiveness

Based upon our observations and testing, the onsite soils are considered to exhibit a very low expansion potential. Therefore, specialized construction procedures to specifically resist expansive soil activity are not anticipated at this time. In order to verify this, additional evaluation of on-site and any imported soils for their expansion potential should be conducted during the grading operations.

Sulfate Protection

The results of sulfate testing conducted on representative samples expected to be encountered at foundation levels are presented in Appendix C.

Based on the test results, it appears that there is a negligible sulfate exposure to concrete elements in contact with on site materials. These concentrations indicate an exposure class S0 for sulfate. Additional testing for soluble sulfate content should be conducted during the construction of the project. Special design criteria for concrete elements in contact with such materials is not warranted.

Exterior Flatwork

To provide adequate support, exterior flatwork improvements should rest upon a minimum of 12 inches of soil compacted to at least 90 percent (ASTM D 1557). Flatwork surfaces should be sloped a minimum of 1 percent away from buildings and sloped to approved drainage structures. Flatwork placed on loose soils may be subject to premature stress (settlement).

Preliminary Pavement Design

As proposed, the site is anticipated to be paved with rock ballast, gravel over aggregate base or similar surfacing. Such is considered acceptable for light vehicle storage provided the subgrade and base materials are prepared as noted below. It should also be noted that such materials are subject to raveling and routine maintenance of rock ballast and/or gravel type surfaces should be anticipated.

Testing and design for preliminary onsite pavement was conducted in accordance with the California Highway Design Manual. Based upon our preliminary sampling and testing, and upon an assumed Traffic Index generally used for similar projects, it appears that the structural sections tabulated below should provide satisfactory pavements for the subject on-site pavement improvements:

AREA	T.I.	DESIGN R-VALUE	PRELIMINARY SECTION
On site vehicular parking with incidental truck traffic (ADTT=1)	5.0	50	0.25' AC / 0.35' AB or 4" JPCP / 4" AB (Total GE required =0.80')
On site vehicular parking with occasional truck traffic (ADTT=10)	6.0	50	0.25'AC / 0.35'AB or 5" JPCP / 4" AB (Total GE required =0.96')
Holly Road	11.0	50	0.55'AC / 0.75'AB
AC - Asphalt Concrete AB - Class 2 Aggregate Base JPCP - Jointed Plain Concrete Pavement with MR ≥ 600 psi			

The above structural sections are predicated upon 90 percent relative compaction (ASTM D 1557) of all utility trench backfills and 95 percent relative compaction (ASTM D 1557) of the upper 12 inches of pavement subgrade soils and of any aggregate base utilized. In addition, the aggregate base should meet Caltrans specifications for Class 2 Aggregate Base.

In areas of the pavement which will receive high abrasion loads due to start-ups and stops, or where trucks will move on a tight turning radius, consideration should be given to installing concrete pads. Such pads should be a minimum of 5 inch thick concrete, with a 4 inch thick aggregate base. Concrete pads are also recommended in areas adjacent to trash storage areas where heavier loads will occur due to operation of trucks lifting trash dumpsters.

The recommended concrete pavement sections should have a minimum modulus of rupture (MR) of 600 pounds per square inch (psi). Transverse joints should be sawcut in the pavement at approximately 12 to 15-foot intervals within 4 to 6 hours of concrete placement, or preferably sooner. Sawcut depth should be equal to approximately one quarter of slab thickness. Construction joints should be constructed such that adjacent sections butt directly against each other and are keyed into each other. Parallel pavement sections should also be keyed into each other.

It should be noted that all of the above pavement design was based upon the results of preliminary sampling and testing, and should be verified by additional sampling and testing during construction when the actual subgrade soils are exposed.

Infiltration Basin

Based upon our field investigation and infiltration test data, infiltration appears feasible at two of the three locations and depths tested. Based on our test results at the two locations, P-1 and P-2, the soils tested have a clear water absorption rate of 5.77 to 6.92 inches per hour. An average clear water absorption rate of 6.3 inches per hour appears to be applicable for the planned infiltration area and depth at these locations, as tested.

The results of our field investigation and percolation test data indicates the site earth materials at the depth and location tested of P-3 are not conducive to acceptable infiltration. Therefore, water quality storm water systems should not incorporate on-site infiltration when determining storm water treatment capacity.

A factor of safety should be applied as indicated by the Technical Guidance Document for Water Quality Management Plans (CDM Smith, 2013). The design infiltration rate should be adjusted using Worksheet H, using the following factor values in determination of the suitability assessment, S_A:

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment method	0.25	1	0.25
		Predominant soil texture	0.25	1	0.25
		Site soil variability	0.25	2	0.5
		Depth to groundwater/impervious layer	0.25	1	0.25
		Suitability Assessment Safety Factor, $S_A = \sum p$			1.25

To ensure continued infiltration capability of the infiltration area, a program to maintain the facility should be considered. This program should include periodic removal of accumulated materials, which can slow the infiltration and decrease the water quality. Materials to be removed from the catch basin areas typically consist of litter, dead plant matter, and soil fines (silts and clays). Proper maintenance of the system is critical.

A maintenance program should be prepared and properly executed. At a minimum, the program should be as outlined in the Technical Guidance Document for Water Quality Management Plans (CDM Smith, 2013).

The program should also incorporate the recommendations contained within this report and any other jurisdictional agency requirements.

Systems should be set back at least 10 feet from foundations or as required by the design engineer.

Any geotextile filter fabric utilized should consist of such that it prevents soil piping but has greater permeability than the existing soil.

During site development, care should be taken to not disturb the area(s) proposed for infiltration as changes in the soil structure could occur resulting in a change of the soil infiltration characteristics.

Dry Wells

The dry well percolation rate test results show an average clear water percolation rate of approximately 28.8 gallons per square foot per day at the locations tested. These are clear water rates and an appropriate factor of safety should be applied.

The data contained within should be reviewed by the design engineer for an appropriate design application rate. In addition, an appropriate factor of safety should be applied by the design engineer based on the type of dry well used and current jurisdictional agency requirements.

To provide a more direct measurement of the absorption rate for the dry well, additional testing could be conducted in the constructed dry well. This result could then be used as the design basis for additional wells, if necessary.

The dry well should be designed to accommodate the anticipated flow. If the infiltration capability of the drywell cannot satisfy the flow requirements, additional dry wells may be required. Should more than one dry well be constructed, they should be appropriately spaced.

Based on our testing, design recommendations cannot be made for dry wells deeper than 50 feet below the proposed ground surface, as tested. The actual depths of dry wells are

subject to local jurisdictional agency requirements. Should additional testing be conducted within a constructed well, these recommendations should be modified accordingly.

To ensure proper drainage of the proposed dry wells, the project civil engineer should provide measures, such as desilting chambers or equivalent, to prevent the buildup of fines (silts and clays), plant debris, etc. within the dry well which can negatively impact the infiltration capability of the system. In addition, a maintenance program, which should include the removal of fines, plant debris, etc., is recommended for adequate long-term performance of the infrastructure.

Construction Monitoring

Post investigative services are an important and necessary continuation of this investigation. Applicable revised or updated project plans and specifications should be reviewed by this firm as construction proceeds to confirm that the intent of the recommendations presented herein have been incorporated into the design.

Verification testing for expansion potential, R-value, and soluble sulfate content should be conducted, as necessary, during the construction of the project. During construction, sufficient and timely geotechnical observation and testing should be provided to correlate the findings of this investigation with the actual subsurface conditions exposed during construction. Items requiring observation and testing include, but are not necessarily limited to, the following:

1. Site preparation-stripping and removals.
2. Excavations and approval of the bottom of excavations prior to backfilling.
3. Scarifying and recompacting prior to fill placement.
4. Placement of engineered compacted fill and backfill, including approval of fill materials and the performance of sufficient density tests to evaluate the degree of compaction being achieved.

LIMITATIONS

This report contains geotechnical conclusions and recommendations developed solely for use by VALFAIR Construction and their design consultants for the purposes described earlier. It may not contain sufficient information for other uses or the purposes of other

parties. The contents should not be extrapolated to other areas or used for other facilities without consulting LOR Geotechnical Group, Inc.

The recommendations are based on interpretations of the subsurface conditions concluded from information gained from observation of the rough graded areas of the site. The interpretations may differ from actual subsurface conditions, which can vary horizontally and vertically across the site.

Due to possible subsurface variations, all aspects of field construction addressed in this report should be observed and tested by the project geotechnical consultant.

If parties other than LOR Geotechnical Group, Inc., provide construction monitoring services, they must be notified that they will be required to assume responsibility for the geotechnical phase of the project being completed by concurring with the recommendations provided in this report or by providing alternative recommendations.

The report was prepared using generally accepted geotechnical engineering practices under the direction of a state licensed geotechnical engineer. No warranty, expressed or implied, is made as to conclusions and professional advice included in this report. Any persons using this report for bidding or construction purposes should perform such independent investigations as deemed necessary to satisfy themselves as to the surface and subsurface conditions to be encountered and the procedures to be used in the performance of work on this project.

TIME LIMITATIONS

The findings of this report are valid as of this date. Changes in the condition of a property can, however, occur with the passage of time, whether they be due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Governmental Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a significant amount of time without a review by LOR Geotechnical Group, Inc., verifying the suitability of the conclusions and recommendations.

CLOSURE

It has been a pleasure to assist you with this project. We look forward to being of further assistance to you as construction continues. Should conditions be encountered during construction that appear to be different than indicated by this report, please contact this office immediately in order that we might evaluate their effect.

Should you have any questions regarding this report, please do not hesitate to contact this office at your convenience.

Respectfully submitted,
LOR Geotechnical Group, Inc.



Andrew A. Tardie
Staff Geologist

John P. Leuer, GE 2030
President

AAT:JPL:ss

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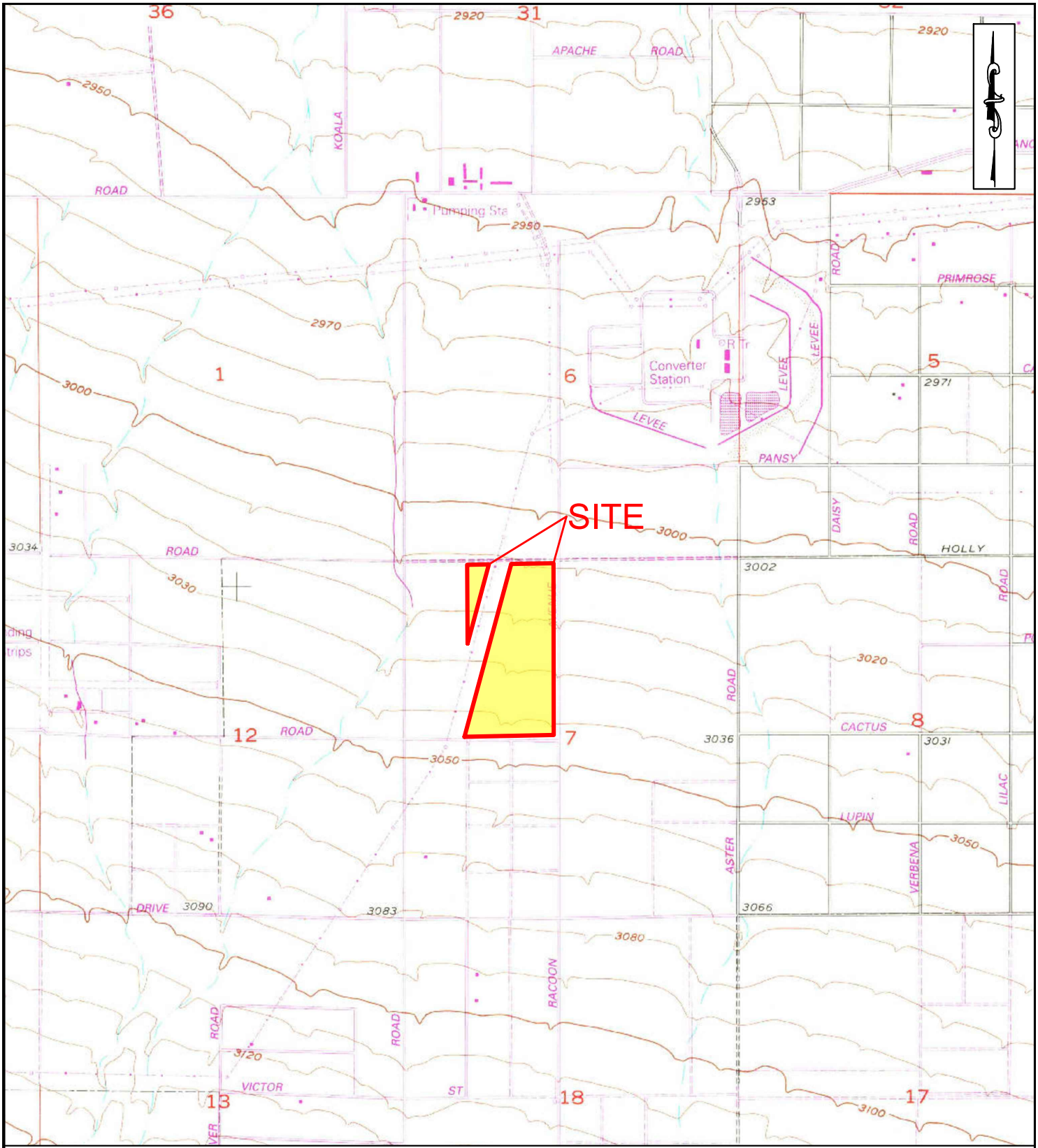
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California Department of Water Resources, 2022, http://wdl.water.ca.gov/waterdatalibrary/

APPENDIX A

Index Map and Site Plan



INDEX MAP

PROJECT:	APNs 3128-341-01, -02, 04, and -06, Adelanto, California	**PROJECT NO.:**	23863.1
CLIENT:	55555 Amargosa, LLC	**ENCLOSURE:**	A-1
LOR GEOTECHNICAL GROUP, INC.		**DATE:**	October 2022
		SCALE:	1" ≈ 2,000'

Legend

(Locations Approximate)

Map Symbols

- **B-20** - Exploratory Boring
- **P-5** - Percolation Test

TEST 5' BELOW EXISTING GRADE

TEST 5' BELOW EXISTING GRADE

SITE BOUNDARY

P-3 P-5 B-4 B-5 B-8 B-12 B-13 B-20 P-2 P-4 B-3 B-9 B-14 B-19 B-15 B-18 B-6 B-7 B-11 B-10 B-16 B-17 P-1 B-1 B-2

SITE BOUNDARY

TEST 5' BELOW EXISTING GRADE

SITE PLAN

PROJECT NO.:	23863.1
ENCLOSURE:	A-2
DATE:	October 2022
SCALE:	1" ≈ 230'

PROJECT: APNs 3128-341-01, -02, 04, and -06, Adelanto, California

CLIENT: VALFAIR Construction

LOR GEOTECHNICAL GROUP, INC.

APPENDIX B

Field Investigation Program and Boring Logs

APPENDIX B
FIELD INVESTIGATION

Subsurface Exploration

Our subsurface exploration of the site consisted of drilling 20 exploratory borings to depths between 11 and 50 feet below the existing ground surface using a Mobile B-61 drill rig on October 11 through 13, 2022. The approximate locations of the borings are shown on Enclosure A-2 within Appendix A.

The drilling exploration was conducted using a Mobile B-61 drill rig equipped with 8-inch diameter hollow stem augers. The soils were continuously logged by a geologist from this firm who inspected the site, created detailed logs of the borings, obtained undisturbed, as well as disturbed, soil samples for evaluation and testing, and classified the soils by visual examination in accordance with the Unified Soil Classification System.

Relatively undisturbed samples of the subsoils were obtained at a maximum interval of 5 feet. Samples were recovered by using a California split barrel sampler of 2.50-inch inside diameter and 3.25-inch outside diameter. The samplers were driven by a 140-pound automatic trip hammer dropped from a height of 30 inches. The number of hammer blows required to drive the sampler into the ground the final 12 inches were recorded and further converted to an equivalent SPT N-values which are included in the boring logs, Enclosures B-1 through B-20.

The undisturbed soil samples were retained in brass sample rings of 2.42 inches in diameter and 1.00 inch in height, and placed in sealed plastic containers. Disturbed soil samples were obtained at selected levels within the borings and placed in sealed containers for transport to our geotechnical laboratory.

All samples obtained were taken to our geotechnical laboratory for storage and testing. Detailed logs of the borings are presented on the enclosed Boring Logs, Enclosures B-1 through B-20. A Boring Log Legend is presented on Enclosure B-i. A Soil Classification Chart is presented as Enclosure B-ii.

CONSISTENCY OF SOIL

SANDS

SPT BLOWS	CONSISTENCY
0-4	Very Loose
4-10	Loose
10-30	Medium Dense
30-50	Dense
Over 50	Very Dense

COHESIVE SOILS

SPT BLOWS	CONSISTENCY
0-2	Very Soft
2-4	Soft
4-8	Medium
8-15	Stiff
15-30	Very Stiff
30-60	Hard
Over 60	Very Hard

SAMPLE KEY

Symbol	Description
	INDICATES CALIFORNIA SPLIT SPOON SOIL SAMPLE INDICATES BULK SAMPLE INDICATES SAND CONE OR NUCLEAR DENSITY TEST INDICATES STANDARD PENETRATION TEST (SPT) SOIL SAMPLE

TYPES OF LABORATORY TESTS

1	Atterberg Limits
2	Consolidation
3	Direct Shear (undisturbed or remolded)
4	Expansion Index
5	Hydrometer
6	Organic Content
7	Proctor (4", 6", or Cal216)
8	R-value
9	Sand Equivalent
10	Sieve Analysis
11	Soluble Sulfate Content
12	Swell
13	Wash 200 Sieve

BORING LOG LEGEND

PROJECT:	APNs 3128-341-01, -02, -04, & -06, Adelanto, California	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ENCLOSURE:**	B-i
LOR GEOTECHNICAL GROUP, INC.		**DATE:**	October, 2022

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

PARTICLE SIZE LIMITS

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE	
12"	3"	3/4"	No . 4	No. 10	No. 40	200	

(U.S. STANDARD SIEVE SIZE)

SOIL CLASSIFICATION CHART

PROJECT:	APNs 3128-341-01, -02, -04, & -06, Adelanto, California	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ENCLOSURE:**	B-ii
LOR GEOTECHNICAL GROUP, INC.		**DATE:**	October, 2022

LOG OF BORING B-1

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0		7, 9, 10, 11						SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 15% coarse grained sand, 35% medium grained sand, 30% fine grained sand, 20% silty fines, brown, damp.
	32		1.1		116.2				@ 0.5 foot, dry.
5	68 for 11"		1.2		112.6				@ 5 feet, trace gravel to 3/4".
10	65		3.0		110.6				@ 10 feet, damp.
									END OF BORING @ 11'
									No fill
									No groundwater
									No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-1

LOG OF BORING B-2

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
				TEST DATA					
0	68		2.1		108.9			SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, damp. @ 0.5 foot, dry. @ 2 feet, SILTY SAND, approximately 15% coarse grained sand, 25% medium grained sand, 35% fine grained sand, 25% silty fines, white brown, dry, heavy calcification.
5	51		1.6		111.6				@ 5 feet, SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, dry, weakly cemented, minor secondary calcite.
10	65		1.2					SW	@ 10 feet, WELL GRADED SAND, approximately 5% gravel to 1/2", 30% coarse grained sand, 30% medium grained sand, 30% fine grained sand, 5% silty fines, brown, dry.
									END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-2

LOG OF BORING B-3

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
			TEST DATA						
0	67 for 11"		2.4		102.6			SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, damp. @ 0.5 foot, dry. @ 2 feet, SILTY SAND, approximately 20% coarse grained sand, 25% medium grained sand, 30% fine grained sand, 25% silty fines, white brown, dry, heavy calcification.
5	65		3.3		115.4				
10	42		3.0		111.3				END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-3

LOG OF BORING B-4

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0		8, 9, 10, 11						SP SM SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 5% coarse grained sand, 25% medium grained sand, 60% fine grained sand, 10% silty fines, brown, damp. @ 0.5 foot, SILTY SAND, approximately 15% coarse grained sand, 25% medium grained sand, 35% fine grained sand, 25% silty fines, brown, dry, some secondary calcite.
	49		2.7		118.3				
5	72		3.3		115.3				
10	42		2.7					ML	@ 10 feet, SANDY SILT, approximately 15% medium grained sand, 20% fine grained sand, 65% silty fines, white brown, dry, some secondary calcite.
									END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-4

LOG OF BORING B-5

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
			TEST DATA						
0	43		1.7		117.5			SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 35% medium grained sand, 35% fine grained sand, 20% silty fines, brown, damp. @ 0.5 foot, dry. @ 2 feet, SILTY SAND, approximately 20% coarse grained sand, 30% medium grained sand, 35% fine grained sand, 15% silty fines, brown, dry.
5	30		2.2		108.5				@ 5 feet, SILTY SAND, approximately 5% coarse grained sand, 15% medium grained sand, 45% fine grained sand, 35% silty fines, brown, dry, some thin calcite stringers.
10	57		2.9		117.4				END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-5

LOG OF BORING B-6

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
0		7, 8, 9, 10, 11						SP SM SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 5% coarse grained sand, 30% medium grained sand, 55% fine grained sand, 10% silty fines, brown, damp. @ 0.5 foot, SILTY SAND, approximately 5% coarse grained sand, 15% medium grained sand, 45% fine grained sand, 35% silty fines, brown, dry, trace thin calcite stringers.
	20		1.7		104.0				
5	22		1.3		110.4			SP	@ 5 feet, POORLY GRADED SAND, approximately 10% coarse grained sand, 40% medium grained sand, 45% fine grained sand, 5% silty fines.
10	60		3.2						END OF BORING @ 11.5' No fill No groundwater No bedrock

TEST DATA

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-6

LOG OF BORING B-7

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0								SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 5% coarse grained sand, 30% medium grained sand, 50% fine grained sand, 15% silty fines, brown, damp. @ 0.5 foot, dry.
	25		1.5		109.7				@ 2 feet, SILTY SAND, approximately 5% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 20% silty fines, white brown, dry, heavy calcification.
5	39		2.1		109.4				@ 5 feet, calcification limited to some thin stringers.
10	45		0.8		122.1			SW	@ 10 feet, WELL GRADED SAND, 30% coarse grained sand, 30% medium grained sand, 35% fine grained sand, 5% silty fines, gray, dry.
									END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-7

LOG OF BORING B-8

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
0								SP SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 5% coarse grained sand, 30% medium grained sand, 55% fine grained sand, 10% silty fines, brown, damp. @ 0.5 foot, dry.
	47		1.2		117.3			SM	@ 2 feet, SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, dry.
5	68 for 10"		2.6		109.3				@ 5 feet, contains some thin calcite stringers.
10	87		3.4						END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-8

LOG OF BORING B-9

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
		TEST DATA							
0		9, 10, 11						SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 25% medium grained sand, 45% fine grained sand, 20% silty fines, brown, damp.
	67		2.7		113.7				@ 0.5 foot, SILTY SAND, approximately 10% coarse grained sand, 25% medium grained sand, 40% fine grained sand, 25% silty fines, brown, dry, some thin calcite stringers.
5	38		1.9		114.8				
10	50		2.4		112.4			ML	@ 10 feet, SANDY SILT, approximately 10% medium grained sand, 15% fine grained sand, 75% silty fines, white brown, dry, heavy calcification.
									END OF BORING @ 11.5'
									No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 12, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-9

LOG OF BORING B-10

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0	43		4.9		117.0			SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, dry.
									@ 2 feet, SILTY SAND, approximately 15% coarse grained sand, 30% medium grained sand, 30% fine grained sand, 25% silty fines, brown, dry, some secondary calcite.
5	51		7.0		114.3				@ 5 feet, slightly coarser grained, white brown, moderate to heavy calcification.
10	31		4.6						@ 10 feet, calcite present as thin stringers.
									END OF BORING @ 11.5'
									No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-10

LOG OF BORING B-11

DEPTH IN FEET	TEST DATA: SPT BLOW COUNTS	TEST DATA: LABORATORY TESTS	TEST DATA: MOISTURE CONTENT (%)	TEST DATA:	TEST DATA: DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
0	64		2.7		112.2			SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 15% coarse grained sand, 35% medium grained sand, 35% fine grained sand, 15% silty fines, brown, dry.
									@ 2 feet, SILTY SAND, approximately 25% medium grained sand, 45% fine grained sand, 30% silty fines, brown, dry, weakly cemented, some thin calcite stringers.
5	64		3.4		120.0				
10	36		2.3		114.4			SP SM	@ 10 feet, POORLY GRADED SAND with SILT, approximately 10% coarse grained sand, 35% medium grained sand, 45% fine grained sand, 10% silty fines, brown, dry.
									END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-11

LOG OF BORING B-12

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0								SP SM	@ 0 feet, ALLUVIUM: **POORLY GRADED SAND with SILT, approximately 10% coarse grained sand, 25% medium grained sand, 55% fine grained sand, 10% silty fines, brown, dry.**
	22		1.2					SP	@ 2 feet, **POORLY GRADED SAND, approximately 15% coarse grained sand, 30% medium grained sand, 50% fine grained sand, 5% silty fines, brown, dry, rings disturbed.**
5	69		6.8					SM	@ 5 feet, **SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 30% fine grained sand, 30% silty fines, brown, damp, trace thin calcite stringers, rings disturbed.**
10	31		3.0						@ 10 feet, **slightly finer grained, white brown, increase in secondary calcite.**
									END OF BORING @ 11.5' **No fill** **No groundwater** **No bedrock**

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-12

LOG OF BORING B-13

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
			TEST DATA						
0								SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, dry.
	39		3.1		113.3				@ 2 feet, SILTY SAND, approximately 5% coarse grained sand, 10% medium grained sand, 45% fine grained sand, 40% silty fines, brown, dry to damp.
5	58		4.0		124.9				@ 5 feet, SILTY SAND, trace gravel to 1/2", approximately 10% coarse grained sand, 30% medium grained sand, 40% fine grained sand, 20% silty fines, brown, damp, trace thin calcite stringers.
10	33		2.2		102.6			ML	@ 10 feet, SANDY SILT, approximately 15% medium grained sand, 30% fine grained sand, 55% silty fines, white brown, dry, heavy calcification.
									END OF BORING @ 11.5'
									No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-13

LOG OF BORING B-14

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0		9, 10, 11						SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 5% coarse grained sand, 25% medium grained sand, 50% fine grained sand, 20% silty fines, brown, dry.
	31		2.0		116.1				@ 2 feet, slightly coarser grained.
5	45		3.0		112.8				@ 5 feet, becomes weakly cemented.
10	46		7.1					ML	@ 10 feet, SANDY SILT, approximately 15% medium grained sand, 15% fine grained sand, 70% silty fines, brown, damp, some thin calcite stringers.
									END OF BORING @ 11.5'
									No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-14

LOG OF BORING B-15

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0								SP SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 10% coarse grained sand, 30% medium grained sand, 50% fine grained sand, 10% silty fines, brown, dry.
	52		4.1		114.1			SM	@ 2 feet, SILTY SAND, approximately 15% coarse grained sand, 30% medium grained sand, 40% fine grained sand, 15% silty fines, brown, damp, weakly cemented.
5	68		4.0		109.2				
10	38		7.3		97.7				@ 10 feet, SILTY SAND, approximately 80% fine grained sand, 20% silty fines, gray, dry.
									END OF BORING @ 11.5'
									No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-15

LOG OF BORING B-16

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
									TEST DATA
0		9, 10, 11						SP	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 10% coarse grained sand, 35% medium grained sand, 45% fine grained sand, 10% silty fines, brown, dry.
	28		1.8		114.7			SM	@ 0.5 foot, SILTY SAND, approximately 10% coarse grained sand, 25% medium grained sand, 40% fine grained sand, 25% silty fines, brown, dry.
5	36		1.8		109.0			SM	@ 5 feet, damp, weakly cemented.
10	44		4.3						@ 10 feet, SILTY SAND, approximately 15% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 35% silty fines, brown, dry.
									END OF BORING @ 11.5'
									No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-16

LOG OF BORING B-17

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
			TEST DATA						
0	45		8.1		123.2			SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, dry.
									@ 2 feet, SILTY SAND, approximately 15% coarse grained sand, 25% medium grained sand, 30% fine grained sand, 30% silty fines, brown, damp.
5	28		2.7		115.2				@ 5 feet, slightly coarser grained.
									@ 7 feet, some gravel.
10	52		3.7		108.2				@ 10 feet, SILTY SAND, approximately 20% coarse grained sand, 30% medium grained sand, 30% fine grained sand, 20% silty fines, gray brown, dry, heavy calcification.
									END OF BORING @ 11.5'
									No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-17

LOG OF BORING B-18

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0								SM	@ 0 feet, ALLUVIUM: SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 15% silty fines, brown, dry.
	23		1.1					SW	@ 2 feet, WELL GRADED SAND, 30% coarse grained sand, 30% medium grained sand, 35% fine grained sand, 5% silty fines, brown, dry, rings disturbed.
5	35		1.4						@ 5 feet, rings disturbed.
10	39		4.8					SM	@ 10 feet, SILTY SAND, approximately 10% coarse grained sand, 25% medium grained sand, 30% fine grained sand, 35% silty fines, brown, dry.
									END OF BORING @ 11.5'
									No fill
									No groundwater
									No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-18

LOG OF BORING B-19

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0								SP SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 10% coarse grained sand, 30% medium grained sand, 50% fine grained sand, 10% silty fines, brown, dry.
	60		1.9		111.7			SM	@ 2 feet, SILTY SAND, approximately 5% coarse grained sand, 15% medium grained sand, 60% fine grained sand, 20% silty fines, brown, dry.
5	56		2.5		118.4			SW SM	@ 5 feet, WELL GRADED SAND with SILT, 25% coarse grained sand, 30% medium grained sand, 35% fine grained sand, 10% silty fines, brown, dry.
10	36		4.9		107.9			SM	@ 10 feet, SILTY SAND, approximately 5% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 45% silty fines, white brown, dry, heavy calcification.
									END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-19

LOG OF BORING B-20

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
	TEST DATA								
0		7, 9, 10, 11						SP SM SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 10% coarse grained sand, 35% medium grained sand, 45% fine grained sand, 10% silty fines, brown, dry. @ 0.5 foot, SILTY SAND, approximately 10% coarse grained sand, 30% medium grained sand, 35% fine grained sand, 25% silty fines, brown, dry to damp.
	61 for 10"		7.2		103.9				
5	63		5.6		109.0				@ 5 feet, contains some secondary calcite.
10	33		1.3					SW	@ 10 feet, WELL GRADED SAND, 25% coarse grained sand, 35% medium grained sand, 35% fine grained sand, 5% silty fines, gray, dry.
									END OF BORING @ 11.5' No fill No groundwater No bedrock

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 13, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-20

LOG OF BORING P-4

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
0								SP SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 5% coarse grained sand, 25% medium grained sand, 60% fine grained sand, 10% silty fines, brown, damp.
									@ 0.5 foot, dry.
5								SM	@ 5 feet, SILTY SAND, trace gravel to 1/2", approximately 15% coarse grained sand, 30% medium grained sand, 40% fine grained sand, 15% silty fines, gray brown, dry.
10								ML	@ 10 feet, SANDY SILT, approximately 15% medium grained sand, 20% fine grained sand, 65% silty fines, gray brown, dry, some secondary calcite.
15									@ 15 feet, becomes slightly finer grained.
20									
25									@ 25 feet, SANDY SILT, approximately 15% coarse grained sand, 15% medium grained sand, 15% fine grained sand, 55% silty fines, gray, dry.
30								SM	@ 30 feet, SILTY SAND, approximately 20% coarse grained sand, 20% medium grained sand, 20% fine grained sand, 40% silty fines, gray, dry.
35								ML SM	@ 35 foot, SANDY SILT/SILTY SAND, trace gravel to 1/2", approximately 10% coarse grained sand, 20% medium grained sand, 20% fine grained sand, 50% silty fines, gray, dry.
40								SM	@ 40 feet, SILTY SAND, approximately 20% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 30% silty fines, gray, dry.
45									@ 45 feet, slightly finer grained.
50									END OF BORING @ 50'
									No fill
									No groundwater
55									No bedrock

TEST DATA

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1	
CLIENT:	VALFAIR Construction	**ELEVATION:**	--	
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 11, 2022	
		EQUIPMENT:	Mobile B-61	
		HOLE DIA.: 8"	**ENCLOSURE:**	B-21

LOG OF BORING P-5

DEPTH IN FEET	SPT BLOW COUNTS	LABORATORY TESTS	MOISTURE CONTENT (%)		DRY DENSITY (PCF)	SAMPLE TYPE	LITHOLOGY	U.S.C.S.	DESCRIPTION
0								SP SM	@ 0 feet, ALLUVIUM: POORLY GRADED SAND with SILT, approximately 10% coarse grained sand, 25% medium grained sand, 55% fine grained sand, 10% silty fines, brown, damp. @ 0.5 foot, dry.
5								SM	@ 5 feet, SILTY SAND, approximately 5% gravel to 1", 25% coarse grained sand, 25% medium grained sand, 25% fine grained sand, 20% silty fines, gray brown, dry.
10								SP SM	@ 10 feet, POORLY GRADED SAND with SILT, approximately 15% coarse grained sand, 30% medium grained sand, 45% fine grained sand, 10% silty fines, brown, dry.
15								SM	@ 15 feet, SILTY SAND, approximately 20% coarse grained sand, 25% medium grained sand, 35% fine grained sand, 20% silty fines, gray brown, dry.
20									@ 20 feet, trace gravel.
25									
30									
35								ML	@ 33 feet, SANDY SILT, approximately 15% medium grained sand, 30% fine grained sand, 55% silty fines, gray brown, dry.
40									@ 38 feet, trace clay.
45									END OF BORING @ 40' No fill No groundwater No bedrock

TEST DATA

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**ELEVATION:**	--
LOR GEOTECHNICAL GROUP, INC.		**DATE DRILLED:**	October 11, 2022
		EQUIPMENT:	Mobile B-61
		HOLE DIA.: 8"	**ENCLOSURE:** B-22

APPENDIX C

Laboratory Testing Program and Test Results

APPENDIX C
LABORATORY TESTING

General

Representative samples of weathered bedrock materials obtained from the excavations were tested in our geotechnical laboratory to evaluate the physical properties of the materials affecting foundation design and construction procedures. The laboratory testing program performed in conjunction with our investigation included in-place moisture content and dry density, laboratory compaction characteristics, sieve analysis, sand equivalent, R-value, and soluble sulfate content. Descriptions of the laboratory tests are presented in the following paragraphs:

Moisture Density Tests

The moisture content and dry density information provides an indirect measure of soil consistency for each stratum, and can also provide a correlation between soils on this site. The dry unit weight and field moisture content were determined for selected undisturbed samples, in accordance with ASTM D 2921 and ASTM D 2216, respectively, and the results are shown on the boring logs, Enclosures B-1 through B-20 for convenient correlation with the soil profile.

Laboratory Compaction

Selected soil samples were tested in the laboratory to determine compaction characteristics using the ASTM D 1557 compaction test method. The results are presented in the following table:

LABORATORY COMPACTION				
Boring Number	**Sample Depth (feet)**	**Soil Description (U.S.C.S.)**	**Maximum Dry Density (pcf)**	**Optimum Moisture Content (percent)**
B-1	0-3	(SM) Silty Sand	131.0	6.0
B-4	0-3	(SM) Silty Sand	129.0	8.0
B-20	0-3	(SM) Silty Sand	129.5	8.0

Sieve Analysis

A quantitative determination of the grain size distribution was performed for a selected sample in accordance with the ASTM D 422 laboratory test procedure. The determination is performed by passing the soil through a series of sieves, and recording the weights of retained particles on each screen. The results of the sieve analysis are presented graphically on Enclosures C-1 and C-2.

Sand Equivalent

The sand equivalent of selected soils were evaluated using the California Sand Equivalent Test Method, Caltrans Number 217. The results of the sand equivalent tests are presented with the grain size distribution analyses on Enclosures C-1 and C-2.

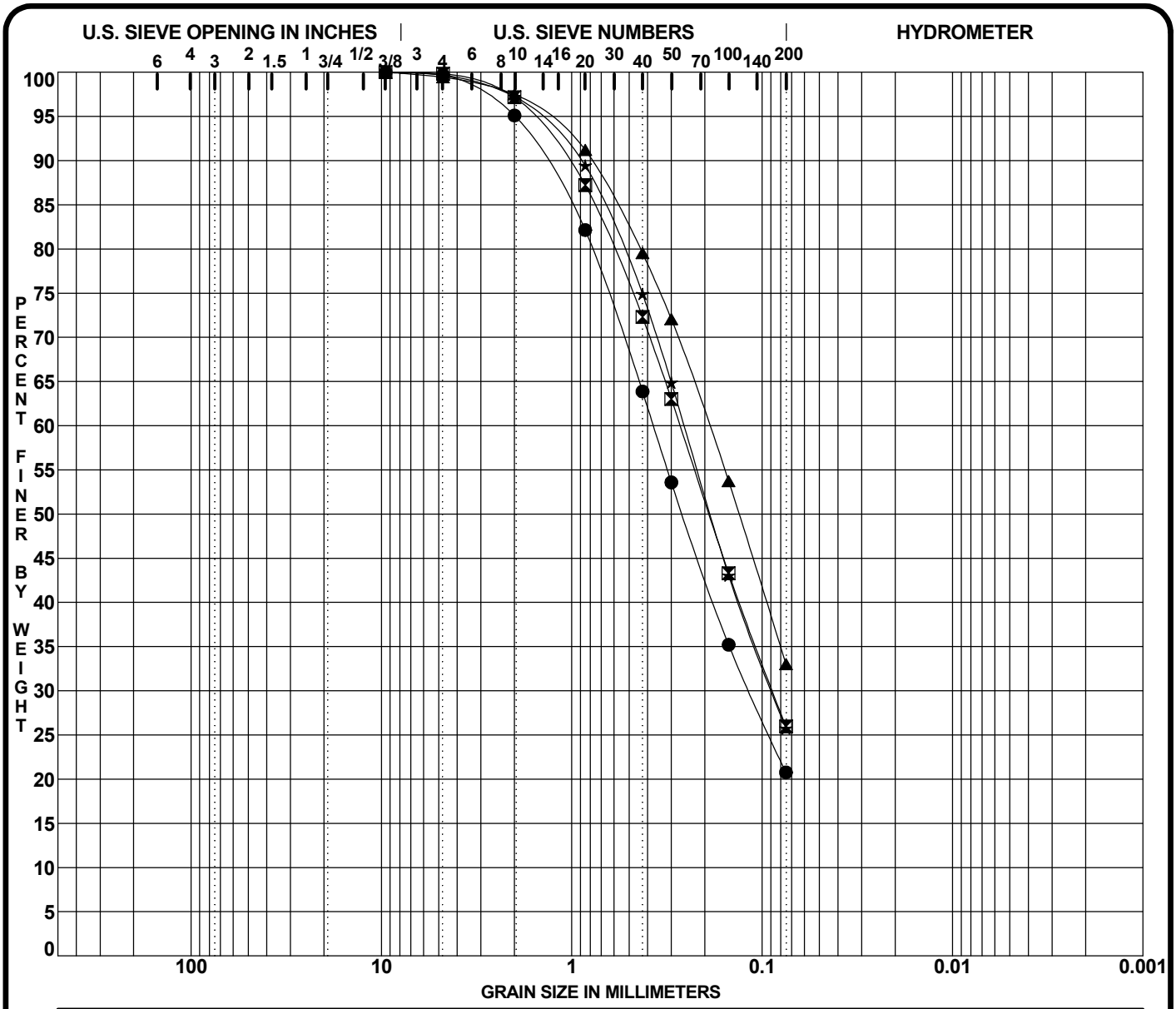
R-Value Test

Based on the results of the sieve analysis and sand equivalent tests, select soil samples anticipated at probable pavement subgrade level, were tested to determine their R-value using the California R-Value Test Method, Caltrans Number 301. The results of the R-value tests are presented on Enclosure C-1.

Soluble Sulfate Content Tests

The soluble sulfate content of selected subgrade soils was evaluated. The concentration of soluble sulfates in the soils was determined by measuring the optical density of a barium sulfate precipitate. The precipitate results from a reaction of barium chloride with water extractions from the soil samples. The measured optical density is correlated with readings on precipitates of known sulfate concentrations. The test results are presented on the following table:

SOLUBLE SULFATE CONTENT TESTS			
Boring Number	**Sample Depth (feet)**	**Soil Description (U.S.C.S.)**	**Sulfate Content (percent by weight)**
B-1	0-3	(SM) Silty Sand	<0.0005
B-4	0-3	(SM) Silty Sand	<0.0005
B-6	0-3	(SM) Silty Sand	<0.0005
B-9	0-3	(SM) Silty Sand	<0.0005
B-14	0-3	(SM) Silty Sand	<0.0005
B-16	0-3	(SM) Silty Sand	<0.0005
B-20	0-3	(SM) Silty Sand	<0.0005



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Soil Classification	SE	RV	PL	PI	Cc	Cu
●	B-01 @ 0 - 3 ft.	(SM) Silty Sand	25	--				
⊠	B-04 @ 0 - 3 ft.	(SM) Silty Sand	20	68				
▲	B-06 @ 0 - 3 ft.	(SM) Silty Sand	18	70				
★	B-09 @ 0 - 3 ft.	(SM) Silty Sand	18	--				

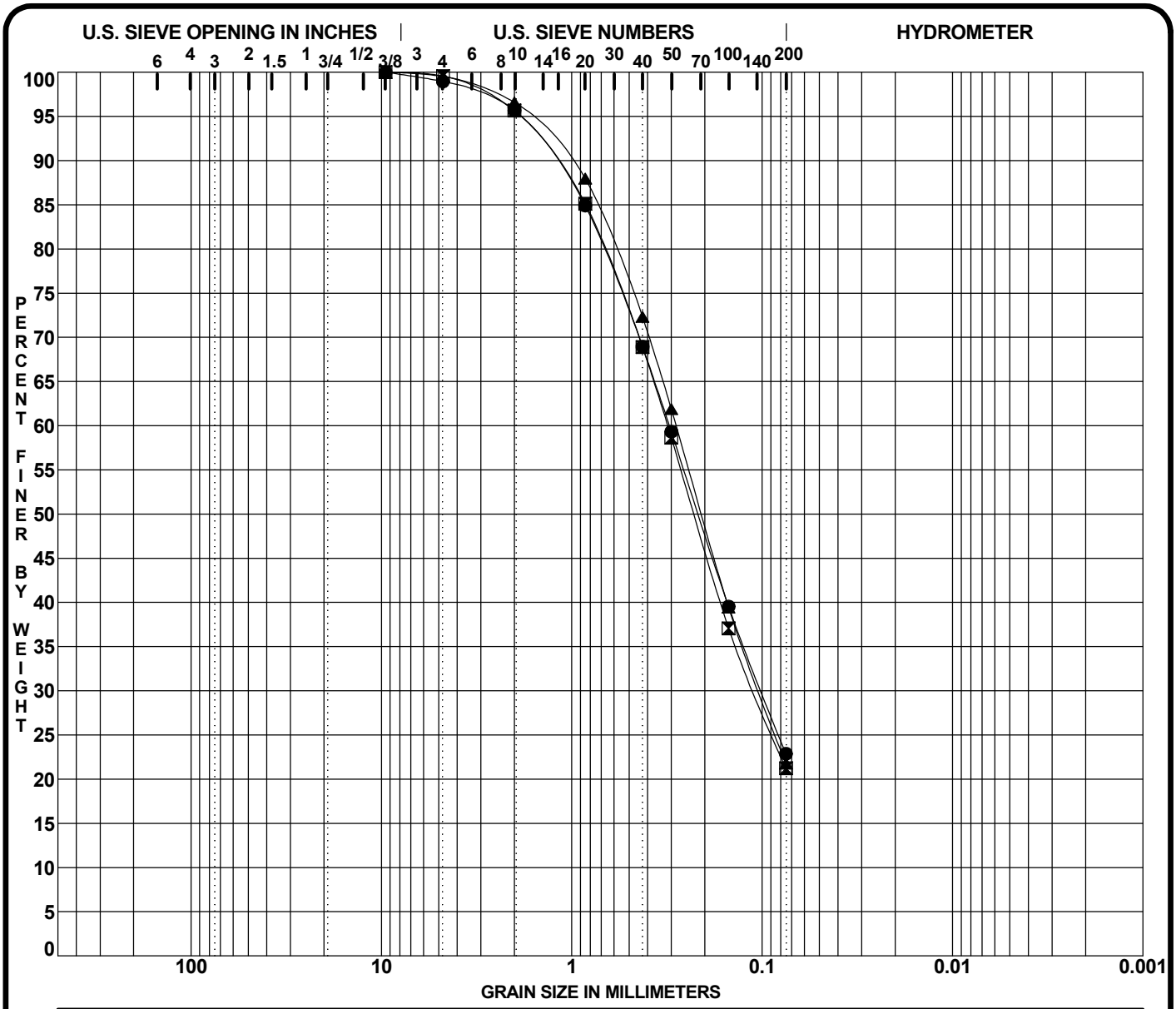
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B-01 @ 0 - 3 ft.	9.50	0.37	0.117		0.3	78.9	20.8	
⊠	B-04 @ 0 - 3 ft.	9.50	0.27	0.088		0.2	73.8	26.0	
▲	B-06 @ 0 - 3 ft.	9.50	0.19			0.6	66.4	33.0	
★	B-09 @ 0 - 3 ft.	9.50	0.26	0.089		0.3	73.9	25.7	

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**DATE:**	October 2022

GRADATION CURVES

LOR GEOTECHNICAL GROUP, INC.

ENCLOSURE: C-1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Soil Classification	SE	RV	PL	PI	Cc	Cu
● B-14 @ 0 - 3 ft.	(SM) Silty Sand	23	--				
⊠ B-16 @ 0 - 3 ft.	(SM) Silty Sand	25	--				
▲ B-20 @ 0 - 3 ft.	(SM) Silty Sand	23	--				

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-14 @ 0 - 3 ft.	9.50	0.31	0.101		1.0	76.1	22.9	
⊠ B-16 @ 0 - 3 ft.	9.50	0.31	0.110		0.4	78.3	21.2	
▲ B-20 @ 0 - 3 ft.	9.50	0.28	0.104		0.5	77.8	21.8	

PROJECT:	APNs 3128-341-01, -02, -04, & -06	**PROJECT NO.:**	23863.1
CLIENT:	VALFAIR Construction	**DATE:**	October 2022

GRADATION CURVES

LOR GEOTECHNICAL GROUP, INC.

ENCLOSURE: C-2

APPENDIX D

Borehole Method and
Falling Head Percolation Test Results

BOREHOLE METHOD PERCOLATION TEST RESULTS

Project:	APNs 3128-01,-02, -04, and -06	Test Date:	October 12, 2022
Project No.:	23863.1	Test Hole No.:	P-1
Soil Classificaiton:	(SM) Silty sand	Effective Hole Dia.*:	4.8 in.
Depth of Test Hole:	5.0 ft.	Date Excavated:	October 11, 2022
Tested By:	R.L.		

READING	TIME START	TIME STOP	TIME INTERVAL		TOTAL TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	INITIAL HOLE DEPTH	FINAL HOLE DEPTH	CHANGE IN WATER LEVEL	AVERAGE WETTED DEPTH	PERCOLATION RATE
			min	hr.	hr.	in.	in.	in.	in.	in.	in.	(min/in)
1	1:15 PM	1:40 PM	25	0.42	0.42	15.00	59.00	60.00	60.00	44.00	23.00	0.6
2	1:50 PM	2:15 PM	25	0.42	0.83	18.00	60.00	60.00	60.00	42.00	21.00	0.6
3	2:16 PM	2:26 PM	10	0.17	1.00	13.00	46.00	60.00	60.00	33.00	30.50	0.3
4	2:30 PM	2:40 PM	10	0.17	1.17	17.00	46.00	60.00	60.00	29.00	28.50	0.3
5	2:42 PM	2:52 PM	10	0.17	1.33	15.00	44.00	60.00	60.00	29.00	30.50	0.3
6	2:53 PM	3:03 PM	10	0.17	1.50	16.00	43.00	60.00	60.00	27.00	30.50	0.4
7	3:04 PM	3:14 PM	10	0.17	1.67	15.00	43.00	60.00	60.00	28.00	31.00	0.4
8	3:15 PM	3:25 PM	10	0.17	1.83	14.00	41.00	60.00	60.00	27.00	32.50	0.4

PERCOLATION RATE CONVERSION (Porchet Method):

H_O	46.00	
H_f	19.00	
ΔH	27.00	
H_{avg}	32.50	
I_t	**5.77**	in/hr (clear water rate)

* diameter adjusted to an effective diameter due to the loss in volume of water because of gravel packing

BOREHOLE METHOD PERCOLATION TEST RESULTS

Project:	APNs 3128-01,-02, -04, and -06	Test Date:	October 12, 2022
Project No.:	23863.1	Test Hole No.:	P-2
Soil Classificaiton:	(SM) Silty sand	Effective Hole Dia.*:	4.8 in.
Depth of Test Hole:	5.0 ft.	Date Excavated:	October 11, 2022
Tested By:	R.L.		

READING	TIME START	TIME STOP	TIME INTERVAL		TOTAL TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	INITIAL HOLE DEPTH	FINAL HOLE DEPTH	CHANGE IN WATER LEVEL	AVERAGE WETTED DEPTH	PERCOLATION RATE
			min	hr.	hr.	in.	in.	in.	in.	in.	in.	(min/in)
1	1:20 PM	1:45 PM	25	0.42	0.42	16.00	59.00	60.00	60.00	43.00	22.50	0.6
2	2:00 PM	2:25 PM	25	0.42	0.83	18.00	58.00	60.00	60.00	40.00	22.00	0.6
3	2:33 PM	2:43 PM	10	0.17	1.00	17.00	48.00	60.00	60.00	31.00	27.50	0.3
4	2:44 PM	2:54 PM	10	0.17	1.17	16.00	48.00	60.00	60.00	32.00	28.00	0.3
5	2:55 PM	3:05 PM	10	0.17	1.33	15.00	47.00	60.00	60.00	32.00	29.00	0.3
6	3:06 PM	3:16 PM	10	0.17	1.50	17.00	48.00	60.00	60.00	31.00	27.50	0.3
7	3:17 PM	3:27 PM	10	0.17	1.67	16.00	46.00	60.00	60.00	30.00	29.00	0.3
8	3:27 PM	3:37 PM	10	0.17	1.83	15.00	45.00	60.00	60.00	30.00	30.00	0.3

PERCOLATION RATE CONVERSION (Porchet Method):

H_O	45.00	
H_f	15.00	
ΔH	30.00	
H_{avg}	30.00	
I_t	**6.92**	in/hr (clear water rate)

* diameter adjusted to an effective diameter due to the loss in volume of water because of gravel packing

BOREHOLE METHOD PERCOLATION TEST RESULTS

Project:	APNs 3128-01,-02, -04, and -06	Test Date:	October 11, 2022
Project No.:	23863.1	Test Hole No.:	P-3
Soil Classificaiton:	(SM) Silty sand	Effective Hole Dia.*:	4.8 in.
Depth of Test Hole:	5.0 ft.	Date Excavated:	October 12, 2022
Tested By:	R.L.		

READING	TIME START	TIME STOP	TIME INTERVAL		TOTAL TIME	INITIAL WATER LEVEL	FINAL WATER LEVEL	INITIAL HOLE DEPTH	FINAL HOLE DEPTH	CHANGE IN WATER LEVEL	AVERAGE WETTED DEPTH	PERCOLATION RATE
			min	hr.	hr.	in.	in.	in.	in.	in.	in.	(min/in)
1	1:30 PM	1:55 PM	25	0.42	0.42	14.00	36.00	60.00	60.00	22.00	35.00	1.1
2	2:02 PM	2:27 PM	25	0.42	0.83	13.00	31.00	60.00	60.00	18.00	38.00	1.4
3	2:35 PM	2:45 PM	10	0.17	1.00	14.00	22.00	60.00	60.00	8.00	42.00	1.3
4	2:47 PM	2:57 PM	10	0.17	1.17	11.00	18.00	60.00	60.00	7.00	45.50	1.4
5	2:59 PM	3:09 PM	10	0.17	1.33	13.00	17.00	60.00	60.00	4.00	45.00	2.5
6	3:10 PM	3:20 PM	10	0.17	1.50	14.00	17.00	60.00	60.00	3.00	44.50	3.3
7	3:21 PM	3:31 PM	10	0.17	1.67	13.00	17.00	60.00	60.00	4.00	45.00	2.5
8	3:33 PM	3:43 PM	10	0.17	1.83	13.00	16.00	60.00	60.00	3.00	45.50	3.3

PERCOLATION RATE CONVERSION (Porchet Method):

H_O	47.00	
H_f	44.00	
ΔH	3.00	
H_{avg}	45.50	
I_t	**0.46**	in/hr (clear water rate)

* diameter adjusted to an effective diameter due to the loss in volume of water because of gravel packing

FALLING HEAD PERCOLATION FOR DRY WELL TEST RESULTS

Project:	APNs 3128-341-01, -02, -04, and -06	Soil Classificaiton:	See Boring Log P-4
Project No.:	23863.1	Depth of Test Hole:	50.00 ft.
Date Excavated:	October 11, 2022	Test Hole Diameter:	8.0 in.
Tested By:	A.L.	Pipe Diameter:	3.0 in.
Test Date:	October 13, 2022	Void Ratio of Gravel:	0.42
Test Hole No.:	P-1	Gravel Correct. Factor:	0.502

READING	TIME START	TIME STOP	TIME INTERVAL		TOTAL TIME	INITIAL WATER LEVEL		FINAL WATER LEVEL		INITIAL HOLE DEPTH	FINAL HOLE DEPTH	CHANGE IN WATER LEVEL	AVERAGE WETTED DEPTH	Q
			min	hr.	hr.	ft.	in.	ft.	in.	ft.	ft.	ft.	ft.	gal/sq.ft./day
1	2:47 PM	3:12 PM	25	0.42	0.42	10.0	0.00	32	6.00	50.00	50.00	22.50	28.75	28.3
2	3:12 PM	3:37 PM	25	0.42	0.83	9.0	0.00	32	2.00	50.00	50.00	23.17	29.42	28.4
3	4:40 PM	4:50 PM	10	0.17	1.00	10.0	2.00	24	9.00	50.00	50.00	14.58	32.54	40.5
4	4:50 PM	5:00 PM	10	0.17	1.17	10.0	3.00	22	3.00	50.00	50.00	12.00	33.75	32.1
5	5:00 PM	5:10 PM	10	0.17	1.33	9.0	6.00	21	9.00	50.00	50.00	12.25	34.38	32.2
6	5:10 PM	5:20 PM	10	0.17	1.50	10.0	2.00	22	0.00	50.00	50.00	11.83	33.92	31.5
7	5:20 PM	5:30 PM	10	0.17	1.67	9.0	5.00	21	2.00	50.00	50.00	11.75	34.71	30.6
8	5:30 PM	5:40 PM	10	0.17	1.83	10.0	5.00	22	2.00	50.00	50.00	11.75	33.71	31.5

Boring Depth:	50.00	ft	
Initial Test Hole Depth:	50.00	ft	
Final Test Hole Depth:	50.00	ft	
Average Application Rate (Q):	31.4	gal/sq. ft./day	(Average of final 4 refilled readings)

FALLING HEAD PERCOLATION FOR DRY WELL TEST RESULTS

Project:	APNs 3128-341-01, -02, -04, and -06	Soil Classificaiton:	See Boring Log P-5
Project No.:	23863.1	Depth of Test Hole:	40.00 ft.
Date Excavated:	October 11, 2022	Test Hole Diameter:	8.0 in.
Tested By:	A.L.	Pipe Diameter:	3.0 in.
Test Date:	October 13, 2022	Void Ratio of Gravel:	0.42
Test Hole No.:	P-2	Gravel Correct. Factor:	0.502

READING	TIME START	TIME STOP	TIME INTERVAL		TOTAL TIME	INITIAL WATER LEVEL		FINAL WATER LEVEL		INITIAL HOLE DEPTH	FINAL HOLE DEPTH	CHANGE IN WATER LEVEL	AVERAGE WETTED DEPTH	Q
			min	hr.	hr.	ft.	in.	ft.	in.	ft.	ft.	ft.	ft.	gal/sq.ft./day
1	2:50 PM	3:15 PM	25	0.42	0.42	10.0	8.00	29	3.00	40.00	40.00	18.58	20.04	33.5
2	3:15 PM	3:40 PM	25	0.42	0.83	10.0	2.00	25	8.00	40.00	40.00	15.50	22.08	25.3
3	4:45 PM	4:55 PM	10	0.17	1.00	8.0	10.00	18	8.00	40.00	40.00	9.83	26.25	33.8
4	4:55 PM	5:05 PM	10	0.17	1.17	9.0	2.00	17	9.00	40.00	40.00	8.58	26.54	29.2
5	5:05 PM	5:15 PM	10	0.17	1.33	8.0	9.00	16	8.00	40.00	40.00	7.92	27.29	26.2
6	5:15 PM	5:25 PM	10	0.17	1.50	8.0	8.00	16	8.00	40.00	40.00	8.00	27.33	26.4
7	5:25 PM	5:35 PM	10	0.17	1.67	8.0	10.00	16	7.00	40.00	40.00	7.75	27.29	25.6
8	5:35 PM	5:45 PM	10	0.17	1.83	8.0	6.00	16	6.00	40.00	40.00	8.00	27.50	26.3

Boring Depth:	40.00	ft	
Initial Test Hole Depth:	40.00	ft	
Final Test Hole Depth:	40.00	ft	
Average Application Rate (Q):	26.1	gal/sq. ft./day	(Average of final 4 refilled readings)

APPENDIX G
Racoon Avenue Greenhouse Gas Analysis

Racoon Avenue

GREENHOUSE GAS ANALYSIS

CITY OF ADELANTO

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MAY 8, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
AB	Assembly Bill
CARB	California Air Resources Board
CAA	Federal Clean Air Act
CAFÉ	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFC	Chlorofluorocarbons
CFR	Code of Federal Regulations
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPUC	California Public Utilities Commission
EPA	Environmental Protection Agency
GCC	Global Climate Change
GHGA	Greenhouse Gas Analysis
GWP	Global Warming Potential
HFC	Hydrofluorocarbons
MDAQMD	Mojave Desert Air Quality Management District
MMT CO_2e	Million Metric Ton of Carbon Dioxide Equivalent
MT CO_2e	Metric Ton of Carbon Dioxide Equivalent
N_2O	Nitrogen Dioxide
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NOx	Oxides of Nitrogen
PFC	Perfluorocarbons
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
PPM	Parts Per Million
SB	Senate Bill
WRI	The World Resources Institute

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Racoon Avenue Greenhouse Gas Analysis* (GHGA) is summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: Would the Project generate direct or indirect GHG emission that would result in a significant impact on the environment?	3.7	*Less Than Significant*	*N/A*
GHG Impact #2: Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?	3.7	*Less Than Significant*	*N/A*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California and the Mojave Desert Air Quality Management District (MDAQMD) aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (AB 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill (SB) 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations (CCR)). Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 20% less by 2030 (7).
- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent to ensure efficient landscapes in new development and reduced water waste in existing landscapes (8).

- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).
- Renewable Portfolio Standards (RPS). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 60 percent by 2030, with interim targets of 44 percent by 2024 and 52 percent by 2027 as well (10).
- Senate Bill 32 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (11).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS, and therefore are accounted for in the Project's emission calculations.

1 INTRODUCTION

This report presents the results of the greenhouse gas analysis (GHGA) prepared by Urban Crossroads, Inc., for the proposed Racoon Avenue ("Project"). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of greenhouse gas (GHG) impacts as a result of constructing and operating the proposed Project.

1.1 SITE LOCATION

The proposed Racoon Avenue Project is located on the corner of Holly Road and Racoon Avenue (APN 3128-34-01, 02, 04, and 06) in the City of Adelanto, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of an industrial parking lot utilized for overflow vehicle storage located on approximately 66 acres, as shown in Exhibit 1-B. The Project is anticipated to have an Opening Year of 2024.

EXHIBIT 1-A: LOCATION MAP

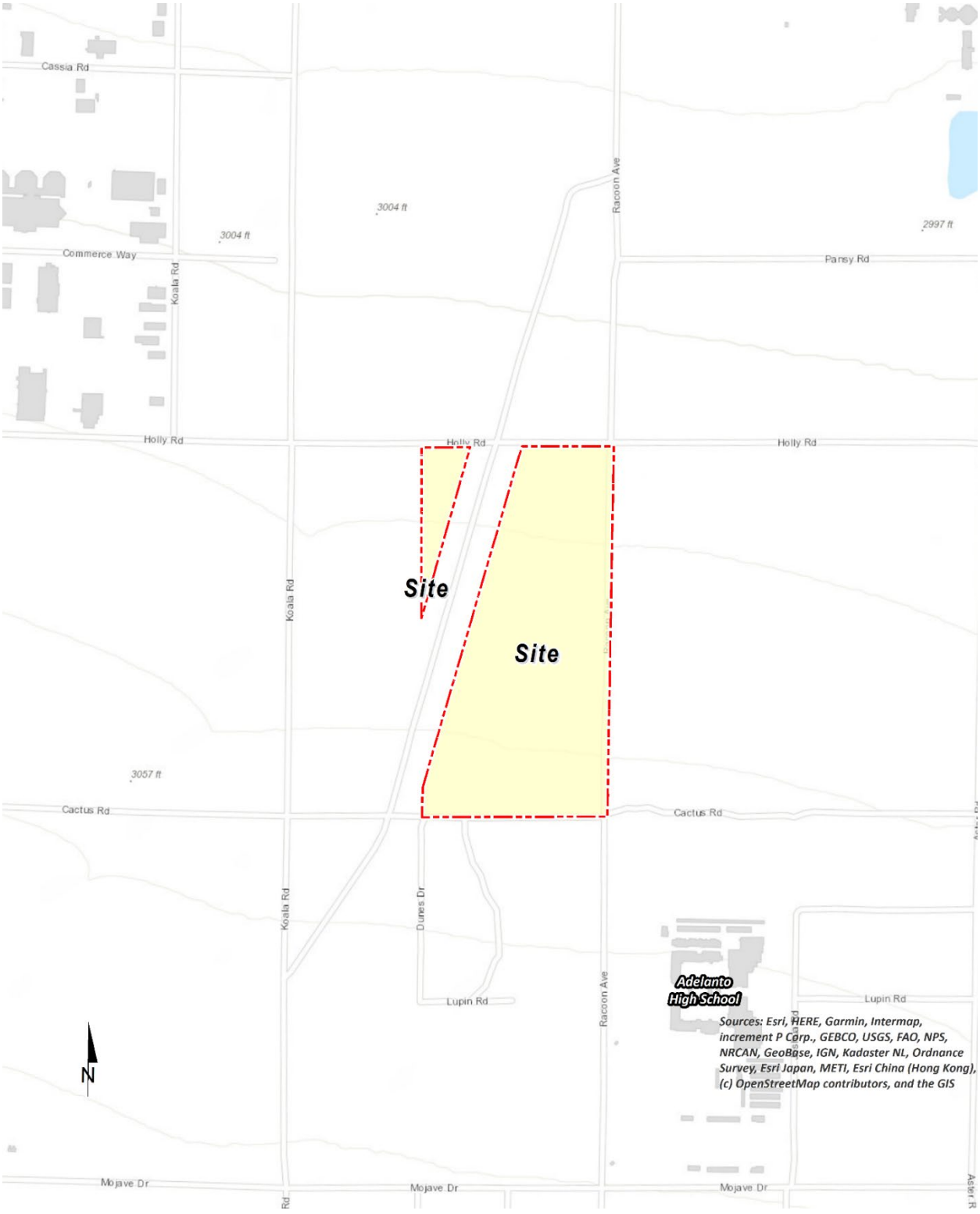
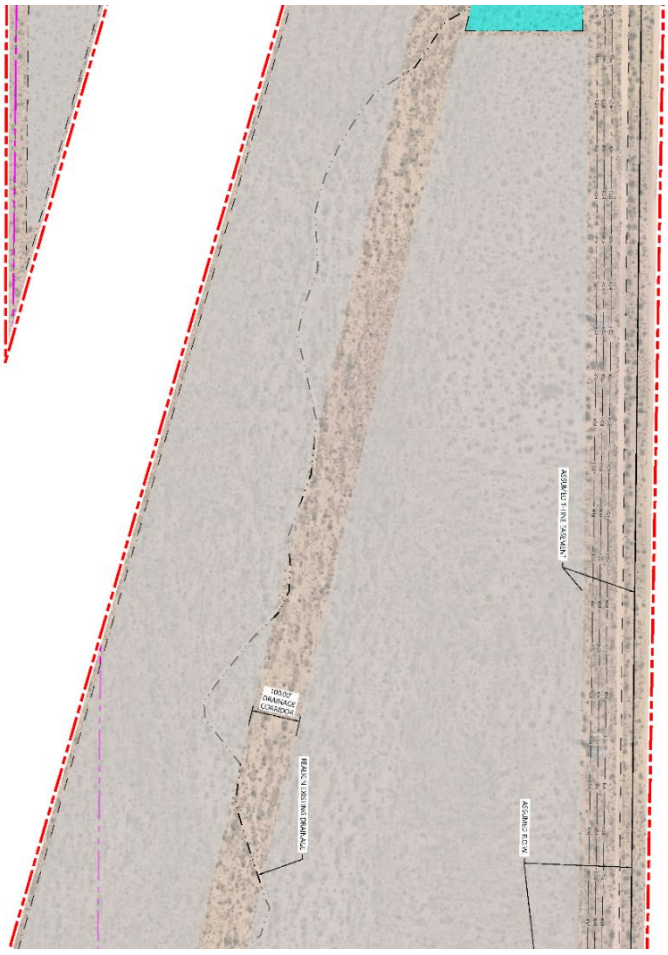


EXHIBIT 1-B: SITE PLAN



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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE (GCC)

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that current GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative increased accumulation of these gases in the earth's atmosphere over the past 200 years is considered to be the cause for the observed increase in the earth's temperature.

2.3 GREENHOUSE GASES

2.3.1 GHGS AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated because these gases are the primary

contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GREENHOUSE GASES

Greenhouse Gases	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. Climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

Greenhouse Gases	Description	Sources	Health Effects
	feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (12).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (13).	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (14).	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (15).

Greenhouse Gases	Description	Sources	Health Effects
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning (16).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to high levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (17).

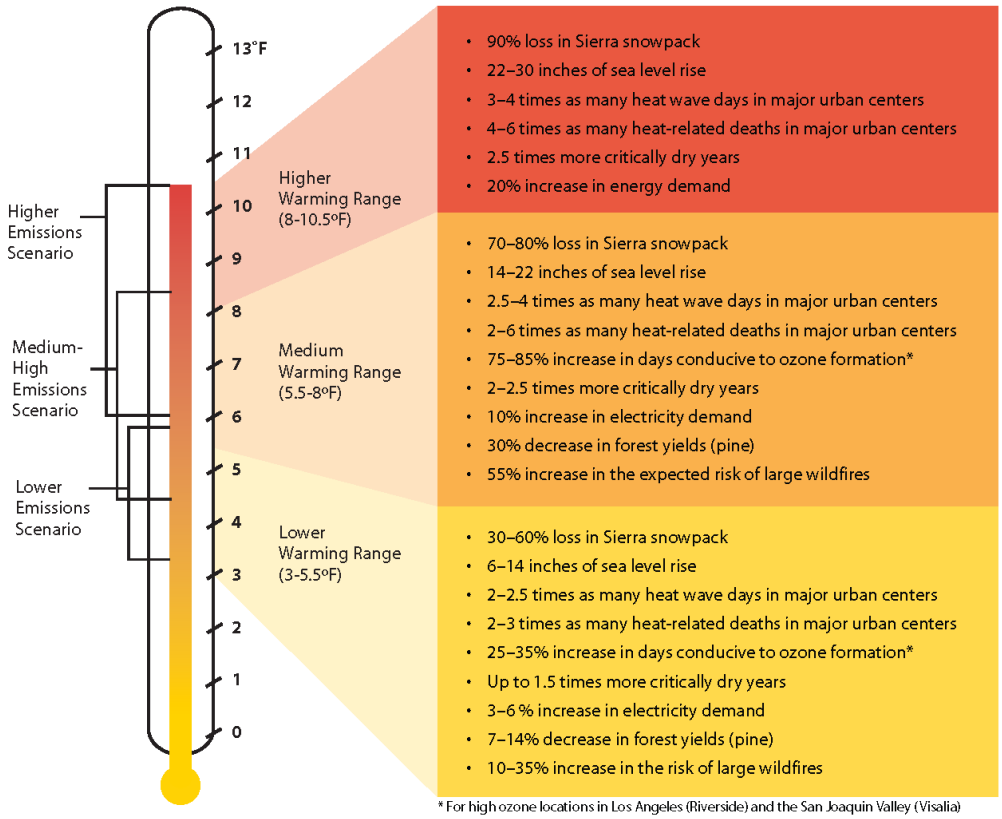
Greenhouse Gases	Description	Sources	Health Effects
		used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (17).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years (18).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

Greenhouse Gases	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), fluoroform (CHF_3), 1,1,1,2-tetrafluoroethane (CH_2FCF), and 1,1-difluoroethane (CH_3CF_2). Prior to 1990, the only significant emissions were of CHF_3. CH_2FCF emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (19). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

Greenhouse Gases	Description	Sources	Health Effects
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200 (20).	NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (21).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (22). Exhibit 2-A presents the potential impacts of global warming (23).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying global warming potential (GWP) values. GWP of a GHG indicates the amount of warming a gas may cause over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the difference GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the 2nd Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO_2 to 23,900 for SF_6 and GWP for the IPCC's 6th Assessment Report range from 1 for CO_2 to 25,200 for SF_6 (24).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)	
		2nd Assessment Report	6th Assessment Report
CO_2	Multiple	1	1
CH_4	11.8	21	28
N_2O	109	310	273
HFC-23	228	11,700	14,600
HFC-134a	14	1,300	1,526
HFC-152a	1.6	140	164
SF_6	3,200	23,900	25,200

Source: IPCC Second Assessment Report, 1995 and IPCC Sixth Assessment Report, 2022

2.5 GREENHOUSE GAS EMISSIONS INVENTORIES

2.5.1 GLOBAL

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2020. Based on the latest available data, the sum of these emissions totaled approximately 28,026,643 gigagram (Gg) CO_2e[1] (25) (26) as summarized on Table 2-3.

[1] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2020 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used U.N. Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014 and 2016, respectively.

2.5.2 UNITED STATES

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2020.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION [2]

Emitting Countries	GHG Emissions (Gg CO_2e)
China	12,300,200
United States	5,981,354
European Union (27-member countries)	3,706,110
India	2,839,420
Russian Federation	2,051,437
Japan	1,148,122
Total	**28,026,643**

2.5.3 STATE OF CALIFORNIA

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States (U.S.) emissions inventory total (27). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2022 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2020 GHG emissions period, California emitted an average 369.2 million metric tons of CO_2e per year ($MMTCO_2e/yr$) or 369,200 Gg CO_2e (6.17% of the total United States GHG emissions) (28).

2.6 REGULATORY SETTING

2.6.1 FEDERAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the Supreme Court found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the federal Clean Air Act (CAA). The Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7,

[2] Used http://unfccc.int data for Annex I countries. Consulted the CAIT Climate Data Explorer in https://www.climatewatchdata.org site to reference Non-Annex I countries of China and India.

2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below (29).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. In 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. The program required these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards were estimated to reduce CO_2 emissions by an estimated 960 million metric tons and save 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses in 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10% reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which declared that the MY 2022-2025 GHG standards are not appropriate and should be revised (30). This Final Determination serves to initiate a notice to further consider appropriate standards for MY 2022-2025 light-duty vehicles. On August 2,2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend exiting Corporate Average Fuel Economy (CAFE) and tailpipe CO_2 standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule, which set new CAFE standards and requires a 1.5% improvement in vehicle fuel efficiency each year through model year 2026 (31).

As of January 2021, Executive Order 13990 directed the EPA to reconsider the EPA's 2019 action titled "The Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program Rule (SAFE-1)" for the purposes of rescinding the action taken by the prior administration (32).

Mandatory Reporting of GHGs

The Consolidated Appropriations Act of 2008 requires the establishment of mandatory GHG reporting requirements. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

New Source Review

The EPA final rule establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."*

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

2.6.2 STATE

2.6.2.1 EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has issued several Executive Orders (EO) to state agencies to reduce GHGs. EO are not legally enforceable on local governments or the private sector. Although not regulatory and not directly applicable to development projects, they set the tone for the state and guide the actions of state agencies.

EXECUTIVE ORDER S-3-05

Executive Order (EO) S-3-05 initiated the State's formal efforts to reduce GHG emissions and set the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target.

EXECUTIVE ORDER S-01-07 (LCFS)

EO S-01-07 mandates a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. CARB adopted the Low Carbon Fuel Standard (LCFS) to achieve the 10% reduction in GHG emissions from the transportation fuels sector by 2020.

EXECUTIVE ORDER S-13-08

EO S-13-08 requires the creation of the California Climate Adaptation Strategy (CCAS), the first of which was adopted. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

EXECUTIVE ORDER B-30-15

EO B-30-15 establishes a California GHG reduction target of 40% below 1990 levels by 2030. The new interim statewide GHG emission reduction target is set at a level to ensure California meets its 2050 target of reducing GHG emissions 80% below 1990 levels. EO B-30-15 directs CARB to update the State Climate Change Scoping Plan to include a 2030 target in terms of millions of MT CO_2e. EO B-30-15 also requires the CCAS to be updated every three years, and for the State to continue its climate change research program, among other provisions.

EXECUTIVE ORDER B-55-18

Executive Order B-55-18 establishes a Statewide policy to achieve carbon neutrality by 2045 and maintain net negative emissions thereafter. As per Executive Order B-55-18, CARB is directed to work with relevant State agencies to develop a framework for implementation and accounting that tracks progress toward this goal and to ensure future Climate Change Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

EXECUTIVE ORDER N-79-20

EO N-79-20 sets new statewide goals for phasing out gasoline-powered cars and trucks in California. Under EO N-79-20, 100% of in-state sales of new passenger cars and trucks are to be zero-emission by 2035; 100% of in-state sales of medium- and heavy-duty trucks and busses are to be zero-emission by 2045, where feasible; and 100% of off-road vehicles and equipment sales are to be zero-emission by 2035, where feasible. EO-79-20 directs CARB and other state agencies to develop regulations or take other steps within existing authority to achieve these goals.

2.6.2.2 LEGISLATIVE ACTIONS TO REDUCE GHGS

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as Global Warming Solutions Act of 2006 (AB32) and the Global Warming Solutions Act of 2006: Emissions Limit (SB 32) which were specifically enacted to address GHG emissions and the 2020 and 2030 targets identified in EO S-3-05.

GLOBAL WARMING SOLUTIONS ACT OF 2006 (AB 32)

In 2006, the State Legislature enacted AB 32, the California Global Solutions Act of 2006 (HSC §38500-38599), which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met since 2016[3]). GHGs as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

[3] Based upon the 2021 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2019 GHG emissions period, California emitted less than the 2020 emissions target of 431 million MT CO_2e in 2016 and each year after that.

GLOBAL WARMING SOLUTIONS ACT OF 2006: EMISSIONS LIMIT (SB 32)

In September 2016, the State Legislature enacted SB 32, the California Global Warming Solutions Act of 2006: Emissions Limit ((HSC §38566)). SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon AB 32 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050 (33).

THE SUSTAINABLE COMMUNITIES AND CLIMATE PROTECTION ACT OF 2008 (SB 375)

According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

VEHICULAR EMISSIONS: GREENHOUSE GASES (AB 1493)

California's AB 1493, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. The standards initially phased in during the 2009 through 2016 model years. The near-term (2009–2012) standards resulted in about a 22% reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards resulted in about a 30% improvement in fuel efficiency. The second phase of the implementation for AB 1493 was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation is intended reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules are intended to clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric vehicles (EV), newly emerging plug-in hybrid EVs, and hydrogen fuel cell vehicles. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

MEDIUM- AND HEAVY-DUTY VEHICLES: COMPREHENSIVE STRATEGY (SB 44)

SB 44 requires CARB, no later than January 1, 2021, and at least every 5 years thereafter, to update CARB's 2016 Mobile Source Strategy to include a comprehensive strategy for the deployment of medium-duty and heavy-duty vehicles in the state for the purpose of bringing the state into compliance with federal ambient air quality standards and reducing motor vehicle greenhouse gas emissions from the medium-duty and heavy-duty vehicle sector. SB 44 further requires CARB to recommend reasonable and achievable goals, for reducing emissions from medium-duty and heavy-duty vehicles by 2030 and 2050, respectively.

CALIFORNIA RENEWABLES PORTFOLIO STANDARD PROGRAM: EMISSIONS OF GREENHOUSE GASES

The State Renewable Portfolio Standard (RPS) was initially established by SB 1078. SB 1078 required electricity providers to increase procurement of electricity from renewable energy sources by at least one percent per year with the goal of reaching 20 percent renewables by 2017. SB 107 accelerated the 20 percent RPS requirement from 2017 to 2010. Subsequently, SB 2 (1X) increased the RPS requirements to 33 percent renewables by 2020 with compliance period targets of 20 percent by 2013 and 25 percent by 2016. SB 350 further increases the RPS requirement to 50 percent by 2030, with interim targets of 40 percent by 2024 and 45 percent by 2027. In addition, the bill requires that 65 percent of RPS procurement must be derived from long-term contracts (10 years or more) starting in 2021. The most recent change is from SB 100, which increases RPS requirements to 60 percent by 2030, with new interim targets of 44 percent by 2024 and 52 percent by 2027 as well. The bill further requires that all of the state's electricity come from carbon-free resources (not only RPS-eligible ones) by 2045.

MODEL WATER EFFICIENT LANDSCAPING ORDINANCE

The Model Water Efficient Landscaping Ordinance (MWELO) was enacted by AB 1881, the Water Conservation Act. AB 1881 required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. EO B-29-15 directs DWR to update the MELOW through expedited regulation. The California Water Commission approved the revised MELOW became effective December 15, 2015, which requires new development projects that include landscape areas of 500 sf to implement:

- More efficient irrigation systems;
- Incentives for graywater usage;
- Improvements in on-site stormwater capture;
- Limiting the portion of landscapes that can be planted with high water use plants; and
- Includes reporting requirements for local agencies.

SB 97 AND THE CEQA GUIDELINES UPDATE

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the OPR shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation

or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA.

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the CEQA Guidelines for implementing the CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 15064.3 was added the CEQA Guidelines and states that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (34).

CALIFORNIA RPS PROGRAM

Under the existing RPS, 25% of retail sales are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), the Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

2.6.2.3 CARB

2017 CARB SCOPING PLAN

In November 2017, CARB released the *Final 2017 Scoping Plan Update* (*2017 Scoping Plan*), which identifies the State's post-2020 reduction strategy. The *2017 Scoping Plan* reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

The *2017 Scoping Plan* establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030 (35).

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the *2017 Scoping Plan* framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the *2017 Scoping Plan* acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the *2017 Scoping Plan* also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the *2017 Scoping Plan* and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and MMs that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year ($MTCO_2e$/yr), indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (36) (37)..

CAP-AND-TRADE PROGRAM

The *2022 Scoping Plan* identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program will help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25.000 $MTCO_2e$/yr must comply with the Cap-and-Trade Program. Triggering of the 25.000 $MTCO_2e$/yr "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year (36).

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the *First Update to the Climate Change Scoping Plan*:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."* (37)

The Cap-and-Trade Program covered approximately 80% of California's GHG emissions (38). The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

2022 CARB SCOPING PLAN

On December 15, 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) (40). The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can

reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with CEQA Guidelines section 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. As stated in the Plan's executive summary:

> "The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California's single largest source of planet-warming pollution."
>
> "[A]pproval of this plan catalyzes a number of efforts, including the development of new regulations as well as amendments to strengthen regulations and programs already in place, not just at CARB but across state agencies."

Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives:

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.
- Complete the High-Speed Rail (HSR) System and other elements of the intercity rail network by 2040.
- Expand and complete planned networks of high-quality active transportation infrastructure.
- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.
- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.

- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.
- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., general plans, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.
- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "…focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting."

Additionally on Page 21 in Appendix D, CARB states: "The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the State's GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future." As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

2.6.2.4 CALIFORNIA REGULATIONS AND BUILDING CODES

Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions.

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

TITLE 20 CCR

CCR, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recently approved update consisting of the 2022 California Green Building Code Standards that was effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made (39). These require, among other items (40):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.

- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).

- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2.

2.6.3 REGIONAL/SAN BERNARDINO COUNTY

MDAQMD CEQA Guidelines

According to the MDAQMD's *CEQA and Federal Conformity Guidelines*, a project is significant if it triggers or exceeds the most appropriate evaluation criteria. The MDAQMD states that in general, for GHG emissions, the significance emission threshold of 100,000 Tons CO_2e (90,718.5 MT CO_2e) per year is sufficient (41). A significant project must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation.

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3 PROJECT GREENHOUSE GAS IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant greenhouse gas impact. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State *CEQA Guidelines* (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (34):

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The evaluation of an impact under CEQA requires measuring data from a project against both existing conditions and a "threshold of significance." For establishing significance thresholds, the Office of Planning and Research's amendments to the CEQA Guidelines Section 15064.7(c) state "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

CEQA Guidelines Section 15064.4(a) further states, ". . . A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance-based standards."

CEQA Guidelines Section 15064.4 provides that a lead agency should consider the following factors, among others, in assessing the significance of impacts from greenhouse gas emissions:

- **Consideration #1:** The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2:** Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3:** The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies

address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

3.2.1 THRESHOLDS OF SIGNIFICANCE

The City of Adelanto has not adopted its own numeric threshold of significance for determining impacts with respect to greenhouse (GHG) emissions, thus the MDAQMD threshold of 90,718.5 MTCO2e per year will be utilized. If Project-related GHG emissions do not exceed the 90,718.5 MTCO2e per year threshold, then Project-related GHG emissions would clearly have a less-than-significant impact pursuant to Threshold GHG-1. On the other hand, if Project-related GHG emissions exceed 90,718.5 MTCO2e per year, the Project would be considered a substantial source of GHG emissions.

3.3 MODELS EMPLOYED TO ANALYZE GREENHOUSE GASES EMISSIONS

Land uses such as the Project affect GHGs through construction-source and operational-source emissions.

3.3.1 CALIFORNIA EMISSIONS ESTIMATOR MODEL™

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation (42). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. CalEEMod output for both construction and operational scenarios is provided in Appendix 3.1.

3.4 CONSTRUCTION EMISSIONS

Project construction activities would generate CO_2 and CH_4 emissions. The report *Racoon Avenue Air Quality Impact Analysis Report* (Urban Crossroads, Inc.) (AQIA) contains detailed information regarding Project construction activities (43). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

3.4.1 CONSTRUCTION DURATION

Construction is expected to commence in January 2024 and will last through August 2024. The construction schedule utilized in the analysis, shown in Table 3-1, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission

factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[4] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA guidelines* (44).

TABLE 3-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	1/1/2024	1/8/2024	6
Grading	1/9/2024	1/29/2024	15
Building Construction	1/30/2024	8/30/2024	154
Paving	8/16/2024	8/30/2024	11
Architectural Coating	8/16/2024	8/30/2024	11

Source: Construction schedule based on CalEEMod default parameters.

3.4.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The equipment list is generally based on CalEEMod default parameters and confirmed with the Project Applicant. A detailed summary of construction equipment assumptions by phase is provided at Table 3-2. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1.

TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment[1]	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8

[4] As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version, Section 4.3"OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Construction Activity	Equipment[1]	Amount	Hours Per Day
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: Construction equipment based on CalEEMod default parameters.

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

To evaluate Project construction emissions, GHGs are quantified and amortized over the life of the Project and added to the operations emissions. MDAQMD follows the SCAQMD recommendation in calculating the total GHG emissions for construction activities by amortizing the emissions over the life of the Project by dividing it by a 30-year project life then adding that number to the annual operational phase GHG emissions (41). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3-3.

TABLE 3-3: CONSTRUCTION GHG EMISSIONS

Year	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e
2024	399.56	0.01	0.02	0.14	407.39
Total Annual Construction Emissions	399.56	0.01	0.02	0.14	407.39
Amortized Construction Emissions ($MTCO_2e$)	**13.37**	**0.00**	**0.00**	**0.00**	**13.63**

Source: CalEEMod, Appendix 3.1

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of CO_2, CH_4, N_2O and R from the following primary sources:

- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment are typically the only area sources that would generate emissions, which are primarily due to fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be

noted that the proposed land uses have no emissions associated with landscape maintenance equipment.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. It should be noted the proposed Project land use will not utilize natural gas. CalEEMod default parameters were used to calculate indirect emissions resulting from the use of electricity.

3.5.3 MOBILE SOURCE EMISSIONS

Project-related operational air quality impacts derive primarily from the 30 vehicle trips generated by the Project. Trip characteristics available from the *Holly Road and Racoon Avenue Trip Generation Analysis* (TJW Engineering, Inc.) were utilized in this analysis (45).

3.6 EMISSIONS SUMMARY

The annual GHG emissions associated with the Project are summarized in Table 3-4. It should be noted that the proposed Project land use does not have emissions associated with area, water, solid waste, or refrigerants. As shown in Table 3-4, construction and operation of the Project would generate a total of 530.58 $MTCO_2e/yr$.

TABLE 3-4: PROJECT GHG EMISSIONS SUMMARY

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e
Amortized Construction Emissions	13.32	3.50E-04	8.30E-04	4.62E-03	13.58
Mobile Source	114.60	0.00	0.01	0.21	116.43
Energy Source	398.27	0.04	0.00	0.00	400.57
Total CO_2e (All Sources)	**530.58**				

Source: CalEEMod, Appendix 3.1
-- = Emission factor only provided in MT CO_2e

3.7 FINDINGS AND CONCLUSIONS

GHG -1: Would the Project generate GHG emissions either directly or indirectly, that may have a significant impact on the environment?

The City of Adelanto has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. The MDAQMD states that in general, for GHG emissions,

the significance emission threshold of 100,000 Tons CO_2e (90,718.5 MT CO_2e) per year is sufficient to determine if additional analysis is required (41).

As shown in Table 3-4, the Project will result in approximately 530.58 $MTCO_2e$/yr; the proposed project would not exceed the screening threshold of 90,718.5 $MTCO_2e$/yr. Thus, project-related emissions would not have a significant direct or indirect impact on GHG, and climate change and no mitigation or further analysis is required.

GHG-2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The Project's consistency with the 2022 Scoping Plan is discussed below.

2022 SCOPING PLAN CONSISTENCY

Pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (34).

In November 2022, CARB released the Final 2022 Scoping Plan Update, which identifies the State's progress towards the statutory 2030 target, while providing a path towards carbon neutrality and reduce greenhouse gases emissions by 85% below 1990 levels by 2045. Recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40% below 1990 levels by 2030 (46). The Project would not conflict with any of the 2022 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project.

Finally, the Project is consistent with the general plan land use designation, density, building intensity, and applicable policies specified for the Project area in SCAG's Sustainable Community Strategy/Regional Transportation Plan, which pursuant to SB 375 calls for the integration of transportation, land-use and housing policies to plan for achievement of the GHG-emissions target for the region. Thus, a less than significant impact related to GHG emissions from Project construction and operation would occur and no mitigation is required.

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5 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Racoon Avenue Project. The information contained in this health risk assessment is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994.

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ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June, 2013
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APPENDIX 3.1:

CALEEMOD PROJECT EMISSIONS MODEL OUTPUTS

15178 - Racoon Ave Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15178 - Racoon Ave
Construction Start Date	1/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.542422, -117.444046
County	San Bernardino-Mojave Desert
City	Adelanto
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5104
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.12

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Parking Lot	66.0	Acre	66.0	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.88	90.8	21.3	27.1	0.04	0.97	0.20	1.17	0.89	0.05	0.94	—	4,544	4,544	0.18	0.04	0.87	4,562
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.90	4.04	59.7	36.8	0.20	1.85	8.49	10.3	1.74	2.74	4.21	—	28,124	28,124	0.30	3.41	1.20	29,147
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.97	3.47	8.46	8.46	0.02	0.34	0.45	0.79	0.32	0.15	0.46	—	2,413	2,413	0.06	0.15	0.84	2,461
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.63	1.54	1.54	< 0.005	0.06	0.08	0.14	0.06	0.03	0.08	—	400	400	0.01	0.02	0.14	407

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.88	90.8	21.3	27.1	0.04	0.97	0.20	1.17	0.89	0.05	0.94	—	4,544	4,544	0.18	0.04	0.87	4,562
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.90	4.04	59.7	36.8	0.20	1.85	8.49	10.3	1.74	2.74	4.21	—	28,124	28,124	0.30	3.41	1.20	29,147
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.97	3.47	8.46	8.46	0.02	0.34	0.45	0.79	0.32	0.15	0.46	—	2,413	2,413	0.06	0.15	0.84	2,461
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.18	0.63	1.54	1.54	< 0.005	0.06	0.08	0.14	0.06	0.03	0.08	—	400	400	0.01	0.02	0.14	407

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	0.67	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,149	3,149	0.25	0.06	2.99	3,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.64	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,083	3,083	0.25	0.06	0.08	3,106
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.65	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,098	3,098	0.25	0.06	1.29	3,123
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.12	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.00	513	513	0.04	0.01	0.21	517

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Area	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.25	0.67	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,149	3,149	0.25	0.06	2.99	3,175
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Area	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.64	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,083	3,083	0.25	0.06	0.08	3,106
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	0.20	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	692	692	0.02	0.03	1.29	703
Area	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,406	2,406	0.23	0.03	—	2,419
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.23	0.65	0.38	2.58	0.01	0.01	0.23	0.24	0.01	0.04	0.05	0.00	3,098	3,098	0.25	0.06	1.29	3,123

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116
Area	0.00	0.08	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	398	398	0.04	< 0.005	—	401
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.12	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	0.00	513	513	0.04	0.01	0.21	517

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.06	0.59	0.54	< 0.005	0.03	—	0.03	0.02	—	0.02	—	87.1	87.1	< 0.005	< 0.005	—	87.4
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.91	3.91	< 0.005	< 0.005	0.01	3.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	2.71	2.71	—	0.99	0.99	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.41	1.24	< 0.005	0.06	—	0.06	0.05	—	0.05	—	271	271	0.01	< 0.005	—	272
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.26	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.9	44.9	< 0.005	< 0.005	—	45.0
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.21	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	264	264	0.01	0.01	0.03	267
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.60	0.42	25.3	5.39	0.14	0.40	5.52	5.92	0.40	1.41	1.82	—	21,262	21,262	0.02	3.34	1.17	22,259
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.2	11.2	< 0.005	< 0.005	0.02	11.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.02	1.04	0.22	0.01	0.02	0.23	0.24	0.02	0.06	0.07	—	873	873	< 0.005	0.14	0.80	915
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.85	1.85	< 0.005	< 0.005	< 0.005	1.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.19	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	145	145	< 0.005	0.02	0.13	151

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	0.55	5.13	6.00	0.01	0.23	—	0.23	0.21	—	0.21	—	1,110	1,110	0.05	0.01	—	1,114
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.94	1.10	< 0.005	0.04	—	0.04	0.04	—	0.04	—	184	184	0.01	< 0.005	—	184
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.85	7.81	10.0	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	15.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.6	45.6	< 0.005	< 0.005	—	45.7
Paving	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.54	7.54	< 0.005	< 0.005	—	7.57
Paving	—	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.08	1.35	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	224	224	0.01	0.01	0.87	227
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.14	6.14	< 0.005	< 0.005	0.01	6.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.02	1.02	< 0.005	< 0.005	< 0.005	1.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	72.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.37	5.37	< 0.005	< 0.005	—	5.38
Architectural Coatings	—	2.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.89	0.89	< 0.005	< 0.005	—	0.89
Architectural Coatings	—	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Total	0.25	0.22	0.34	3.21	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	744	744	0.02	0.03	2.99	756
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Total	0.23	0.20	0.37	2.36	0.01	0.01	0.23	0.24	0.01	0.04	0.05	—	677	677	0.02	0.03	0.08	687
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116
Total	0.04	0.04	0.07	0.47	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	115	115	< 0.005	0.01	0.21	116

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,406	2,406	0.23	0.03	—	2,419
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	398	398	0.04	< 0.005	—	401
Total	—	—	—	—	—	—	—	—	—	—	—	—	398	398	0.04	< 0.005	—	401

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.45	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.08	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/1/2024	1/8/2024	5.00	6.00	40
Grading	Grading	1/9/2024	1/29/2024	5.00	15.0	110
Building Construction	Building Construction	1/30/2024	8/30/2024	5.00	154	1110
Paving	Paving	8/16/2024	8/30/2024	5.00	11.0	75
Architectural Coating	Architectural Coating	8/16/2024	8/30/2024	5.00	11.0	75

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	305	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	0.00	0.00	172,498

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	21.0	0.00	—
Grading	—	36,600	60.0	0.00	—
Paving	0.00	0.00	0.00	0.00	66.0

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Parking Lot	66.0	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Parking Lot	30.0	30.0	30.0	10,961	845	845	845	308,543

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	172,498

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Parking Lot	2,518,465	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	32.2	annual days of extreme heat
Extreme Precipitation	1.90	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	9.25	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.6

AQ-PM	6.97
AQ-DPM	3.24
Drinking Water	60.3
Lead Risk Housing	43.3
Pesticides	43.5
Toxic Releases	26.0
Traffic	5.26
Effect Indicators	—
CleanUp Sites	88.3
Groundwater	71.8
Haz Waste Facilities/Generators	94.4
Impaired Water Bodies	51.2
Solid Waste	72.4
Sensitive Population	—
Asthma	88.1
Cardio-vascular	99.6
Low Birth Weights	64.2
Socioeconomic Factor Indicators	—
Education	84.8
Housing	77.6
Linguistic	69.8
Poverty	93.2
Unemployment	88.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	5.838573078
Employed	0.179648402
Median HI	1.424355191
Education	—
Bachelor's or higher	10.07314256
High school enrollment	100
Preschool enrollment	10.97138458
Transportation	—
Auto Access	34.2871808
Active commuting	2.399589375
Social	—
2-parent households	21.86577698
Voting	16.77146157
Neighborhood	—
Alcohol availability	93.53265751
Park access	6.877967407
Retail density	4.504042089
Supermarket access	2.399589375
Tree canopy	0.089824201
Housing	—
Homeownership	43.48774541
Housing habitability	26.22866675
Low-inc homeowner severe housing cost burden	67.79160785
Low-inc renter severe housing cost burden	0.295136661
Uncrowded housing	44.92493263
Health Outcomes	—

Insured adults	12.17759528
Arthritis	2.7
Asthma ER Admissions	7.4
High Blood Pressure	6.0
Cancer (excluding skin)	32.7
Asthma	1.7
Coronary Heart Disease	2.7
Chronic Obstructive Pulmonary Disease	0.4
Diagnosed Diabetes	6.3
Life Expectancy at Birth	15.8
Cognitively Disabled	24.2
Physically Disabled	71.5
Heart Attack ER Admissions	1.0
Mental Health Not Good	3.8
Chronic Kidney Disease	5.2
Obesity	15.0
Pedestrian Injuries	19.6
Physical Health Not Good	2.6
Stroke	3.3
Health Risk Behaviors	—
Binge Drinking	73.8
Current Smoker	0.7
No Leisure Time for Physical Activity	11.4
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	19.0

Elderly	85.6
English Speaking	37.4
Foreign-born	40.5
Outdoor Workers	7.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	88.7
Traffic Density	5.6
Traffic Access	23.0
Other Indices	—
Hardship	87.5
Other Decision Support	—
2016 Voting	26.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	89.0
Healthy Places Index Score for Project Location (b)	1.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data Building, Paving, and Architectural Coating overlap to present a conservative analysis Construction schedule compressed to account for 2024 Opening Year
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Operations: Vehicle Data	Trip characteristics based on information from the Trip Analysis

APPENDIX H
Preliminary Drainage Analysis for Copart 66

PRELIMINARY DRAINAGE ANALYSIS

FOR

COPART 66

CITY OF ADELANTO

SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for:

COPART INC.
14185 DALLAS PARKWAY
Dallas, TX 75254

Contact: Craig Gardner
Tel: (972) 564-5525

Prepared by:

CASC Engineering and Consulting

1470 East Cooley Drive
Colton, CA 92324
(909) 783-0101 • Fax (909) 783-0108

JANUARY 2025

This report has been prepared by or under the direction of the following registered civil engineer who attests to the technical information contained herein.

Patrick C. Flanagan, Jr., P.E. Date Seal
Registered Civil Engineer

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- NOAA ATLAS 14 PRECIPITATION DATA
- NATIONAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY
- SCS TRIANGLE UNIT HYDROGRAPHS
- CITY OF ADELANTO DRAINAGE MASTER PLAN (FIGURES 1.0 & 1.1)

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EXHIBIT A: **HYDROLOGY MAP – EXISTING CONDITION (RATIONAL)**

EXHIBIT B: **HYDROLOGY MAP – PROPOSED CONDITION (RATIONAL)**

PART I – ON-SITE ANALYSIS

I. PURPOSE AND SCOPE

The purpose of this drainage analysis is to quantify the 10-year and 100-year storm event runoff emanating from the on-site drainage areas for the Copart 66 Project in the City of Adelanto, San Bernardino County, California. The study will analyze the existing and proposed hydrologic conditions of the Project's drainage areas and determine the necessary drainage improvements to convey the 10-year and 100-year Project flows.

The scope of this analysis includes the following:

1. Determination of points of flow concentration and drainage areas.
2. Determination of the on-site 10-year and 100-year peak storm flows based upon the existing and proposed conditions utilizing the Civil Design Software, Rational Tabling program for San Bernardino County.
3. Preparation of hydrology maps.
4. Preparation of the drainage report.

II. PROJECT DESCRIPTION

The proposed project is located in the City of Adelanto, California. The site is located south of Holly Road, west of Raccoon Avenue, north of Cactus Road, and is currently undeveloped. The site is bounded to the south of Holly Road, west of Raccoon Avenue, north of Cactus Road, east of APNs 3128-331-08, -06, -03, and -01. The project area is approximately 66 acres. Proposed improvements to the site include a parking storage yard, detention basin, trapezoidal channel, and fencing. Offsite improvements to the site include asphalt pavement, curb and gutter, intersection ramp, commercial driveway, and sidewalk.

III. DRAINAGE AREA OVERVIEW

Existing Condition
The project site is currently undeveloped. The site is approximately 0% impervious. Topographically, site elevations range from 3,006 feet to 3,043 feet above Mean Sea Level (MSL). The project site sheet flows from south to north with southern properties contributing to the tributary flows to the project site (See Part II of this analysis).

Proposed Condition
Development of the project includes a parking storage yard, detention basin, trapezoidal channel, and fencing. Offsite improvements to the site include asphalt pavement, curb and gutter, intersection ramp, commercial driveway, and sidewalk. The site will continue to drain in the same pattern as the existing development; however, flows will be directed

via sheet flow to a proposed detention basin along the north portion of the site adjacent to Holly Road. In addition, offsite flows will be directed to a proposed trapezoidal channel along the southerly proposed right of way of the site and will flow northernly through a 220 ft drainage corridor which will then outlet to Holly Road as they have historically.

IV. HYDROLOGY

The San Bernardino County Hydrology Manual (SBCHM), (Reference 1) was used to develop the hydrologic parameters for the hydrology analysis. Pervious areas for the pre-development analysis will be analyzed as the "Barren" cover type with a curve number of 78 per figure C-3 of the SBCHM. Post-development pervious area will be analyzed with a curve number of 77. Hydrologic Soil Groups (HSG) were determined using the Natural Resources Conservation Service Web Soil Survey. The entire study area consists of HSG "A" (see Appendix C).

The Rational Method was used to determine the peak flow rates and times of concentration under the existing and proposed condition. Computations were performed using the RSBC computer program developed by Civil Cadd/Civil Design Engineering Software.

V. STUDY FINDINGS

The existing condition of the site generates a 100-year peak flow rate of 35.76 cfs from watershed A (see Appendix A and Exhibit A). Upon development, the Project will generate a 100-year peak flow rate of 48.69 cfs from watershed A (see Appendix B and Exhibit B). The increased flow rate is a result of the proposed storage parking yard.

VI. CONCLUSION

Based on the findings of this analysis, the proposed grading and drainage designs are anticipated to protect the proposed on-site improvements from the 100-year storm event without causing adverse impacts to downstream drainage conditions. The site will drain similar to how it drains historically. In addition, the post-development watershed A detention basin has a full capacity of 21,788 ft^3 with a total required storage volume of 20,952 ft^3 (see Appendix C).

VII. REFERENCES

1. San Bernardino County; *San Bernardino County Hydrology Manual*, August 1986.
2. NOAA's National Weather Service; NOAA Atlas 14, Volume 6, Version 2. August 8, 2022.
3. National Resources Conservation Service; Web Soil Survey. August 8, 2022.

PART II – OFF-SITE ANALYSIS

I. OFF-SITE ANALYSIS

The subject site receives flows from a large tributary area from the properties to the south. The City of Adelanto's Drainage Master Plan (DMP, Figure 1.0) will be utilized to determine what off-site flows are entering the subject site and how to mitigate those flows. According to the DMP, the subject site is situated in Region 6, tributary to Channel #2, per the Map for Appendix A (Appendix C). The peak flows tributary to the east half of the site, which is part of Region 6. Region 6 is 871.18 acres in size, and the peak flow rate for the 100-year storm in Region 6 is 1098.43 cfs (Figure 1.1). Using the Map for Appendix A, it is estimated that approximately 467 acres are tributary to the project site in region 6.

Region 6 100-year peak flows: Q100 = (467/871.18)*1098.43 CFS = 589 CFS

The Map for Appendix A and chart outlining the information for Region 6 are included in Appendix C, Figures 1.0 & 1.1. As mentioned above in the on-site analysis, dissipator channels will be constructed on-site to convey these off-site flows through the site and continue north as they do historically. The data for off-site flows from Region 6 will be used for the design of the conveyance channels, but will not be a factor in mitigating the increased flows on-site caused by the development.

FIGURE 1: REGIONAL VICINITY MAP

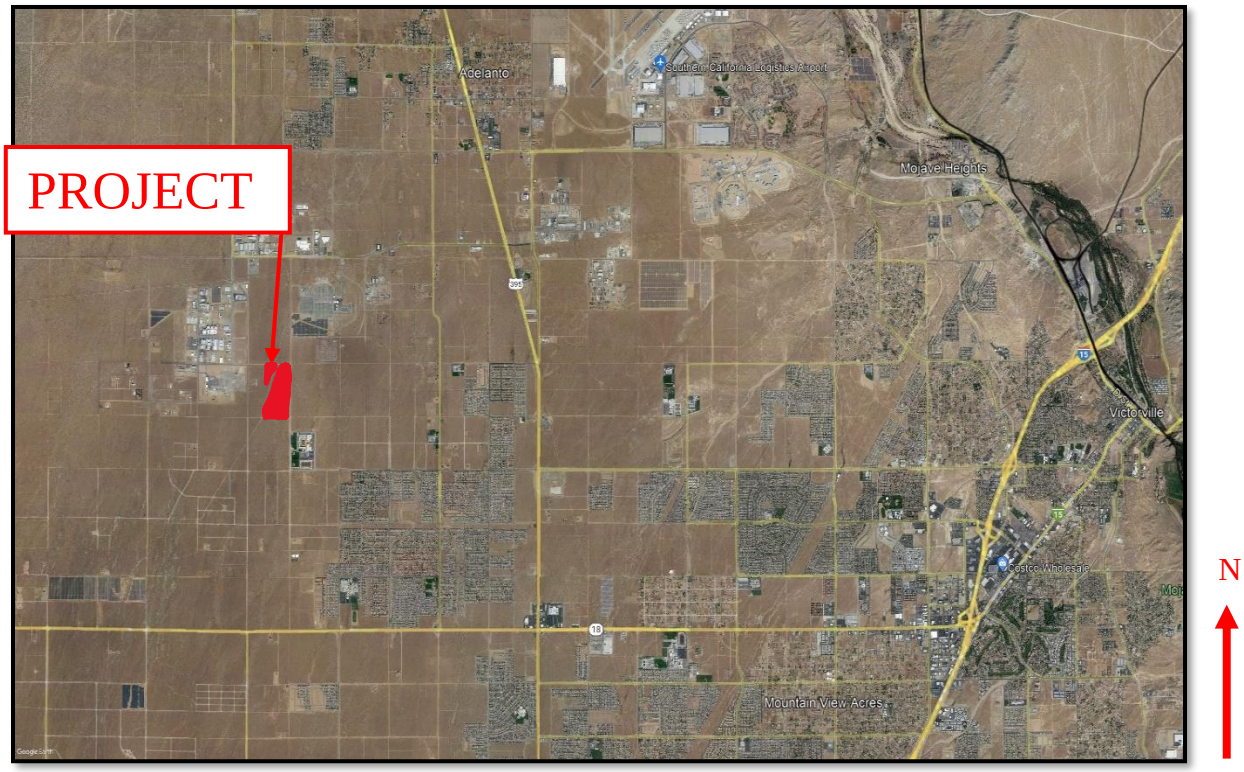


FIGURE 2: LOCAL VICINITY MAP

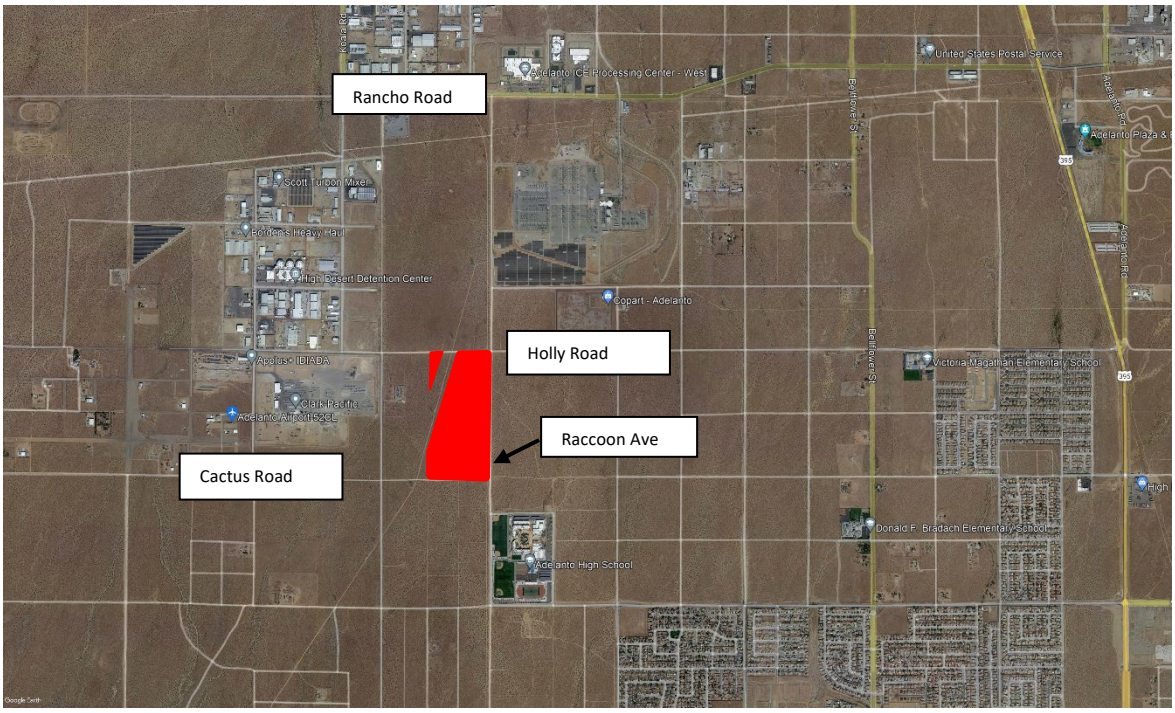
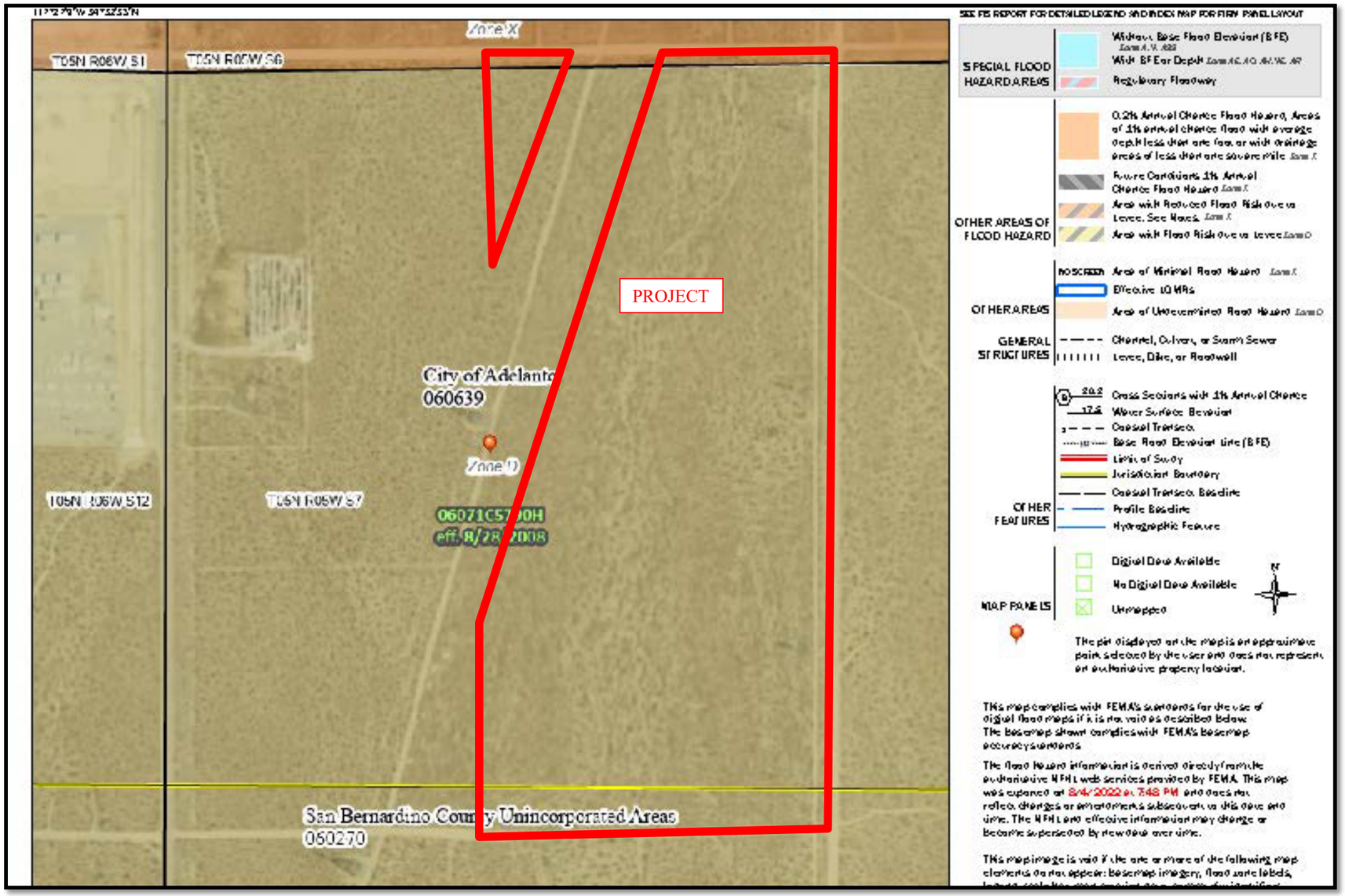


FIGURE 3: FEMA FLOODPLAIN MAP



APPENDIX A

ON-SITE HYDROLOGY BASED ON EXISTING CONDITION (RATIONAL METHOD)

APPENDIX A.1

10-YEAR HYDROLOGY CALCULATIONS (EXISTING)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 01/08/25

1510-0002 COPART
EXISTING RATIONAL
10 YEAR

Program License Serial Number 6522

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.583 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 2

++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****
_____
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.404(In/Hr)
Initial subarea data:
Initial area flow distance = 644.000(Ft.)
Top (of initial area) elevation = 3039.780(Ft.)
Bottom (of initial area) elevation = 3030.820(Ft.)
Difference in elevation = 8.960(Ft.)
Slope = 0.01391 s(%)= 1.39
TC = k(0.615)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 19.220 min.
Rainfall intensity = 1.154(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.585
Subarea runoff = 6.487(CFS)
Total initial stream area = 9.600(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.404(In/Hr)

++
Process from Point/Station 101.000 to Point/Station 102.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_____
Estimated mean flow rate at midpoint of channel = 0.000(CFS)
Depth of flow = 0.104(Ft.), Average velocity = 4.449(Ft/s)
******* Irregular Channel Data **********

Information entered for subchannel number 1 :

Point number	'X' coordinate	'Y' coordinate
1	0.00	0.31
2	62.50	0.00
3	125.00	0.31

Manning's 'N' friction factor = 0.005

Sub-Channel flow = 9.608(CFS)

```
  '     '        flow top width =     41.735(Ft.)
  '     '    velocity=    4.449(Ft/s)
  '     '        area =      2.160(Sq.Ft)
  '     '        Froude number =     3.446

Upstream point elevation =  3030.820(Ft.)
Downstream point elevation =  3007.630(Ft.)
Flow length =  1996.000(Ft.)
Travel time  =    7.48 min.
Time of concentration =   26.70 min.
Depth of flow =   0.104(Ft.)
Average velocity =   4.449(Ft/s)
Total irregular channel flow =     9.608(CFS)
Irregular channel normal depth above invert elev. =   0.104(Ft.)
Average velocity of channel(s) =   4.449(Ft/s)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.404(In/Hr)
Rainfall intensity =      0.948(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.517
Subarea runoff =      6.150(CFS) for   16.200(Ac.)
Total runoff =     12.636(CFS)
Effective area this stream =       25.80(Ac.)
Total Study Area (Main Stream No. 1) =       25.80(Ac.)
Area averaged Fm value =    0.404(In/Hr)
Depth of flow =   0.115(Ft.), Average velocity =   4.764(Ft/s)
End of computations, Total Study Area =           25.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

APPENDIX A.2

100-YEAR HYDROLOGY CALCULATIONS (EXISTING)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 01/08/25

1510-0002 COPART
EXISTING RATIONAL
100 YEAR

Program License Serial Number 6522

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 0.995 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000 Max loss rate(Fm)= 0.140(In/Hr)
Initial subarea data:
Initial area flow distance = 644.000(Ft.)
Top (of initial area) elevation = 3039.780(Ft.)
Bottom (of initial area) elevation = 3030.820(Ft.)
Difference in elevation = 8.960(Ft.)
Slope = 0.01391 s(%)= 1.39
TC = k(0.615)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 19.220 min.
Rainfall intensity = 1.970(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.836
Subarea runoff = 15.811(CFS)
Total initial stream area = 9.600(Ac.)
Pervious area fraction = 1.000
Initial area Fm value = 0.140(In/Hr)

++
Process from Point/Station 101.000 to Point/Station 102.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

Estimated mean flow rate at midpoint of channel = 0.000(CFS)
Depth of flow = 0.150(Ft.), Average velocity = 5.696(Ft/s)
******* Irregular Channel Data ***********

Information entered for subchannel number 1 :

Point number	'X' coordinate	'Y' coordinate
1	0.00	0.31
2	62.50	0.00
3	125.00	0.31

Manning's 'N' friction factor = 0.005

```
Sub-Channel flow  =     25.816(CFS)
  '     '         flow top width =     60.459(Ft.)
  '     '    velocity=    5.696(Ft/s)
  '     '         area =      4.533(Sq.Ft)
  '     '         Froude number =     3.666

Upstream point elevation =  3030.820(Ft.)
Downstream point elevation =  3007.630(Ft.)
Flow length =  1996.000(Ft.)
Travel time  =    5.84 min.
Time of concentration =   25.06 min.
Depth of flow =   0.150(Ft.)
Average velocity =   5.696(Ft/s)
Total irregular channel flow =    25.816(CFS)
Irregular channel normal depth above invert elev. =   0.150(Ft.)
Average velocity of channel(s) =   5.696(Ft/s)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 78.00
Adjusted SCS curve number for AMC 3 = 92.80
Pervious ratio(Ap) = 1.0000     Max loss rate(Fm)=     0.140(In/Hr)
Rainfall intensity =      1.680(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.825
Subarea runoff =     19.948(CFS) for   16.200(Ac.)
Total runoff =     35.759(CFS)
Effective area this stream =       25.80(Ac.)
Total Study Area (Main Stream No. 1) =       25.80(Ac.)
Area averaged Fm value =    0.140(In/Hr)
Depth of flow =   0.169(Ft.), Average velocity =   6.179(Ft/s)
End of computations, Total Study Area =           25.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged SCS curve number =  78.0
```

APPENDIX B

ON-SITE HYDROLOGY BASED ON PROPOSED CONDITION (RATIONAL METHOD)

APPENDIX B.1

10-YEAR HYDROLOGY CALCULATIONS (PROPOSED)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 01/08/25

1510-0002 Copart
Proposed Rational Method
10 year

Program License Serial Number 6522

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 10.0
Computed rainfall intensity:
Storm year = 10.00 1 hour rainfall = 0.583 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 2

++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****
_____
Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 77.00
Pervious ratio(Ap) = 0.5000 Max loss rate(Fm)= 0.210(In/Hr)
Initial subarea data:
Initial area flow distance = 588.000(Ft.)
Top (of initial area) elevation = 3043.000(Ft.)
Bottom (of initial area) elevation = 3034.090(Ft.)
Difference in elevation = 8.910(Ft.)
Slope = 0.01515 s(%)= 1.52
TC = k(0.398)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.785 min.
Rainfall intensity = 1.548(In/Hr) for a 10.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.778
Subarea runoff = 11.560(CFS)
Total initial stream area = 9.600(Ac.)
Pervious area fraction = 0.500
Initial area Fm value = 0.210(In/Hr)

++
Process from Point/Station 101.000 to Point/Station 102.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
_____
Estimated mean flow rate at midpoint of channel = 0.000(CFS)
Depth of flow = 0.125(Ft.), Average velocity = 5.611(Ft/s)
******* Irregular Channel Data **********

Information entered for subchannel number 1 :

Point number	'X' coordinate	'Y' coordinate
1	0.00	0.36
2	72.50	0.00
3	145.00	0.36

Manning's 'N' friction factor = 0.005

Sub-Channel flow = 17.707(CFS)

```
  '     '        flow top width =     50.420(Ft.)
  '     '    velocity=    5.611(Ft/s)
  '     '        area =      3.156(Sq.Ft)
  '     '        Froude number =     3.952

Upstream point elevation =  3034.090(Ft.)
Downstream point elevation =  3008.000(Ft.)
Flow length =  1819.000(Ft.)
Travel time  =    5.40 min.
Time of concentration =   17.19 min.
Depth of flow =   0.125(Ft.)
Average velocity =   5.611(Ft/s)
Total irregular channel flow =    17.707(CFS)
Irregular channel normal depth above invert elev. =   0.125(Ft.)
Average velocity of channel(s) =   5.611(Ft/s)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 77.00
Pervious ratio(Ap) = 0.5000     Max loss rate(Fm)=     0.210(In/Hr)
Rainfall intensity =      1.234(In/Hr) for a    10.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.747
Subarea runoff =     12.223(CFS) for   16.200(Ac.)
Total runoff =     23.783(CFS)
Effective area this stream =       25.80(Ac.)
Total Study Area (Main Stream No. 1) =       25.80(Ac.)
Area averaged Fm value =    0.210(In/Hr)
Depth of flow =   0.140(Ft.), Average velocity =   6.040(Ft/s)
End of computations, Total Study Area =           25.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged SCS curve number =  77.0
```

APPENDIX B.2

100-YEAR HYDROLOGY CALCULATIONS (PROPOSED)

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2019 Version 9.1
Rational Hydrology Study Date: 01/08/25

1510-0002 Copart
Proposed Rational Method
100 year

Program License Serial Number 6522

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 0.995 (In.)
Slope used for rainfall intensity curve b = 0.6000
Soil antecedent moisture condition (AMC) = 3

++
Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

Soil classification AP and SCS values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2) = 77.00
Adjusted SCS curve number for AMC 3 = 92.20
Pervious ratio(Ap) = 0.5000 Max loss rate(Fm)= 0.076(In/Hr)
Initial subarea data:
Initial area flow distance = 588.000(Ft.)
Top (of initial area) elevation = 3043.000(Ft.)
Bottom (of initial area) elevation = 3034.090(Ft.)
Difference in elevation = 8.910(Ft.)
Slope = 0.01515 s(%)= 1.52
TC = k(0.398)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.785 min.
Rainfall intensity = 2.642(In/Hr) for a 100.0 year storm
Effective runoff coefficient used for area (Q=KCIA) is C = 0.874
Subarea runoff = 22.173(CFS)
Total initial stream area = 9.600(Ac.)
Pervious area fraction = 0.500
Initial area Fm value = 0.076(In/Hr)

++
Process from Point/Station 101.000 to Point/Station 102.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

Estimated mean flow rate at midpoint of channel = 0.000(CFS)
Depth of flow = 0.162(Ft.), Average velocity = 6.675(Ft/s)
******* Irregular Channel Data **********

Information entered for subchannel number 1 :

Point number	'X' coordinate	'Y' coordinate
1	0.00	0.36
2	72.50	0.00
3	145.00	0.36

Manning's 'N' friction factor = 0.005

```
Sub-Channel flow  =     35.457(CFS)
  '     '        flow top width =     65.417(Ft.)
  '     '    velocity=    6.675(Ft/s)
  '     '        area =      5.312(Sq.Ft)
  '     '        Froude number =     4.128

Upstream point elevation =  3034.090(Ft.)
Downstream point elevation =  3008.000(Ft.)
Flow length =  1819.000(Ft.)
Travel time  =    4.54 min.
Time of concentration =   16.33 min.
Depth of flow =   0.162(Ft.)
Average velocity =   6.675(Ft/s)
Total irregular channel flow =    35.457(CFS)
Irregular channel normal depth above invert elev. =   0.162(Ft.)
Average velocity of channel(s) =   6.675(Ft/s)
 Adding area flow to channel
Soil classification AP and SCS  values input by user
USER INPUT of soil data for subarea
SCS curve number for soil(AMC 2)  = 77.00
Adjusted SCS curve number for AMC 3 = 92.20
Pervious ratio(Ap) = 0.5000     Max loss rate(Fm)=     0.076(In/Hr)
Rainfall intensity =      2.173(In/Hr) for a   100.0 year storm
Effective runoff coefficient used for area,(total area with modified
rational method)(Q=KCIA) is C = 0.869
Subarea runoff =     26.518(CFS) for   16.200(Ac.)
Total runoff =     48.690(CFS)
Effective area this stream =       25.80(Ac.)
Total Study Area (Main Stream No. 1) =       25.80(Ac.)
Area averaged Fm value =    0.076(In/Hr)
Depth of flow =   0.183(Ft.), Average velocity =   7.225(Ft/s)
End of computations, Total Study Area =           25.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
Note: These figures do not consider reduced effective area
effects caused by confluences in the rational equation.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged SCS curve number =  77.0
```

APPENDIX C

REFERENCES

Curve (1) Numbers of Hydrologic Soil-Cover Complexes For Pervious Areas-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparral, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparral, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	71	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent.)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	25	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL COVERS -					
Fallow (Land plowed but not tilled or seeded)		77	86	91	94

SAN BERNARDINO COUNTY

HYDROLOGY MANUAL

CURVE NUMBERS FOR PERVIOUS AREAS

Figure C-3 (1 of 2)

NOAA Atlas 14, Volume 6, Version 2
Location name: Adelanto, California, USA*
Latitude: 34.5393°, Longitude: -117.4469°
Elevation: 3029.66 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.075** (0.062-0.092)	**0.106** (0.087-0.129)	**0.147** (0.121-0.180)	**0.182** (0.148-0.225)	**0.230** (0.182-0.295)	**0.269** (0.208-0.352)	**0.310** (0.234-0.415)	**0.353** (0.259-0.486)	**0.413** (0.290-0.592)	**0.460** (0.313-0.683)
10-min	**0.108** (0.089-0.132)	**0.152** (0.125-0.186)	**0.211** (0.173-0.259)	**0.260** (0.212-0.322)	**0.330** (0.261-0.423)	**0.386** (0.298-0.504)	**0.444** (0.335-0.595)	**0.506** (0.371-0.696)	**0.591** (0.416-0.848)	**0.659** (0.448-0.979)
15-min	**0.131** (0.108-0.160)	**0.183** (0.151-0.224)	**0.255** (0.210-0.313)	**0.315** (0.257-0.390)	**0.399** (0.315-0.511)	**0.467** (0.361-0.610)	**0.537** (0.405-0.719)	**0.612** (0.449-0.842)	**0.715** (0.504-1.03)	**0.797** (0.542-1.18)
30-min	**0.186** (0.154-0.227)	**0.261** (0.215-0.319)	**0.362** (0.298-0.445)	**0.448** (0.365-0.554)	**0.568** (0.449-0.727)	**0.664** (0.513-0.867)	**0.764** (0.577-1.02)	**0.870** (0.638-1.20)	**1.02** (0.716-1.46)	**1.13** (0.771-1.68)
60-min	**0.242** (0.200-0.296)	**0.339** (0.280-0.415)	**0.472** (0.388-0.579)	**0.583** (0.475-0.721)	**0.740** (0.584-0.946)	**0.864** (0.668-1.13)	**0.995** (0.751-1.33)	**1.13** (0.831-1.56)	**1.32** (0.932-1.90)	**1.48** (1.00-2.19)
2-hr	**0.341** (0.282-0.417)	**0.462** (0.381-0.566)	**0.628** (0.517-0.771)	**0.769** (0.628-0.952)	**0.969** (0.765-1.24)	**1.13** (0.874-1.48)	**1.30** (0.980-1.74)	**1.48** (1.09-2.04)	**1.73** (1.22-2.48)	**1.93** (1.31-2.86)
3-hr	**0.421** (0.348-0.515)	**0.564** (0.465-0.690)	**0.760** (0.625-0.933)	**0.928** (0.757-1.15)	**1.17** (0.921-1.49)	**1.36** (1.05-1.78)	**1.56** (1.18-2.09)	**1.78** (1.31-2.45)	**2.08** (1.47-2.99)	**2.33** (1.58-3.46)
6-hr	**0.576** (0.476-0.705)	**0.766** (0.632-0.938)	**1.03** (0.846-1.26)	**1.25** (1.02-1.55)	**1.57** (1.24-2.01)	**1.83** (1.42-2.39)	**2.11** (1.59-2.82)	**2.40** (1.76-3.30)	**2.82** (1.98-4.04)	**3.15** (2.14-4.68)
12-hr	**0.730** (0.603-0.893)	**0.994** (0.820-1.22)	**1.36** (1.12-1.67)	**1.67** (1.36-2.06)	**2.10** (1.66-2.69)	**2.46** (1.90-3.21)	**2.83** (2.13-3.79)	**3.22** (2.37-4.44)	**3.78** (2.66-5.42)	**4.23** (2.88-6.28)
24-hr	**0.980** (0.869-1.13)	**1.37** (1.22-1.58)	**1.91** (1.69-2.21)	**2.37** (2.07-2.76)	**3.01** (2.55-3.62)	**3.52** (2.92-4.33)	**4.06** (3.29-5.11)	**4.63** (3.65-6.00)	**5.44** (4.11-7.34)	**6.09** (4.45-8.51)
2-day	**1.09** (0.966-1.25)	**1.54** (1.36-1.78)	**2.16** (1.91-2.50)	**2.68** (2.35-3.13)	**3.42** (2.90-4.12)	**4.01** (3.33-4.93)	**4.64** (3.76-5.84)	**5.30** (4.18-6.87)	**6.24** (4.71-8.42)	**6.99** (5.10-9.76)
3-day	**1.17** (1.03-1.34)	**1.65** (1.47-1.91)	**2.33** (2.06-2.69)	**2.90** (2.54-3.38)	**3.70** (3.14-4.46)	**4.35** (3.61-5.35)	**5.03** (4.07-6.33)	**5.75** (4.53-7.45)	**6.77** (5.12-9.15)	**7.60** (5.55-10.6)
4-day	**1.24** (1.10-1.43)	**1.76** (1.56-2.03)	**2.49** (2.20-2.88)	**3.10** (2.72-3.62)	**3.97** (3.36-4.78)	**4.66** (3.87-5.73)	**5.39** (4.36-6.79)	**6.16** (4.85-7.98)	**7.26** (5.49-9.80)	**8.15** (5.95-11.4)
7-day	**1.33** (1.18-1.53)	**1.89** (1.67-2.17)	**2.67** (2.36-3.09)	**3.33** (2.92-3.88)	**4.26** (3.62-5.14)	**5.01** (4.16-6.16)	**5.78** (4.68-7.29)	**6.61** (5.20-8.56)	**7.76** (5.87-10.5)	**8.68** (6.34-12.1)
10-day	**1.40** (1.24-1.61)	**1.99** (1.76-2.29)	**2.82** (2.49-3.26)	**3.52** (3.09-4.10)	**4.52** (3.83-5.45)	**5.32** (4.41-6.54)	**6.15** (4.98-7.74)	**7.02** (5.53-9.10)	**8.26** (6.24-11.1)	**9.23** (6.74-12.9)
20-day	**1.62** (1.44-1.87)	**2.34** (2.07-2.69)	**3.35** (2.96-3.87)	**4.21** (3.69-4.91)	**5.46** (4.63-6.57)	**6.46** (5.36-7.95)	**7.52** (6.09-9.47)	**8.63** (6.80-11.2)	**10.2** (7.69-13.7)	**11.4** (8.33-15.9)
30-day	**1.84** (1.63-2.11)	**2.65** (2.35-3.05)	**3.82** (3.38-4.42)	**4.84** (4.24-5.64)	**6.33** (5.36-7.62)	**7.52** (6.25-9.25)	**8.78** (7.11-11.1)	**10.1** (7.97-13.1)	**12.0** (9.05-16.2)	**13.4** (9.82-18.8)
45-day	**2.13** (1.89-2.45)	**3.08** (2.73-3.55)	**4.46** (3.94-5.15)	**5.67** (4.97-6.61)	**7.47** (6.33-8.99)	**8.95** (7.43-11.0)	**10.5** (8.51-13.2)	**12.2** (9.57-15.7)	**14.5** (10.9-19.5)	**16.3** (11.9-22.8)
60-day	**2.38** (2.11-2.74)	**3.41** (3.02-3.93)	**4.95** (4.37-5.72)	**6.31** (5.53-7.35)	**8.33** (7.06-10.0)	**10.0** (8.31-12.3)	**11.8** (9.57-14.9)	**13.7** (10.8-17.8)	**16.4** (12.4-22.1)	**18.5** (13.5-25.9)

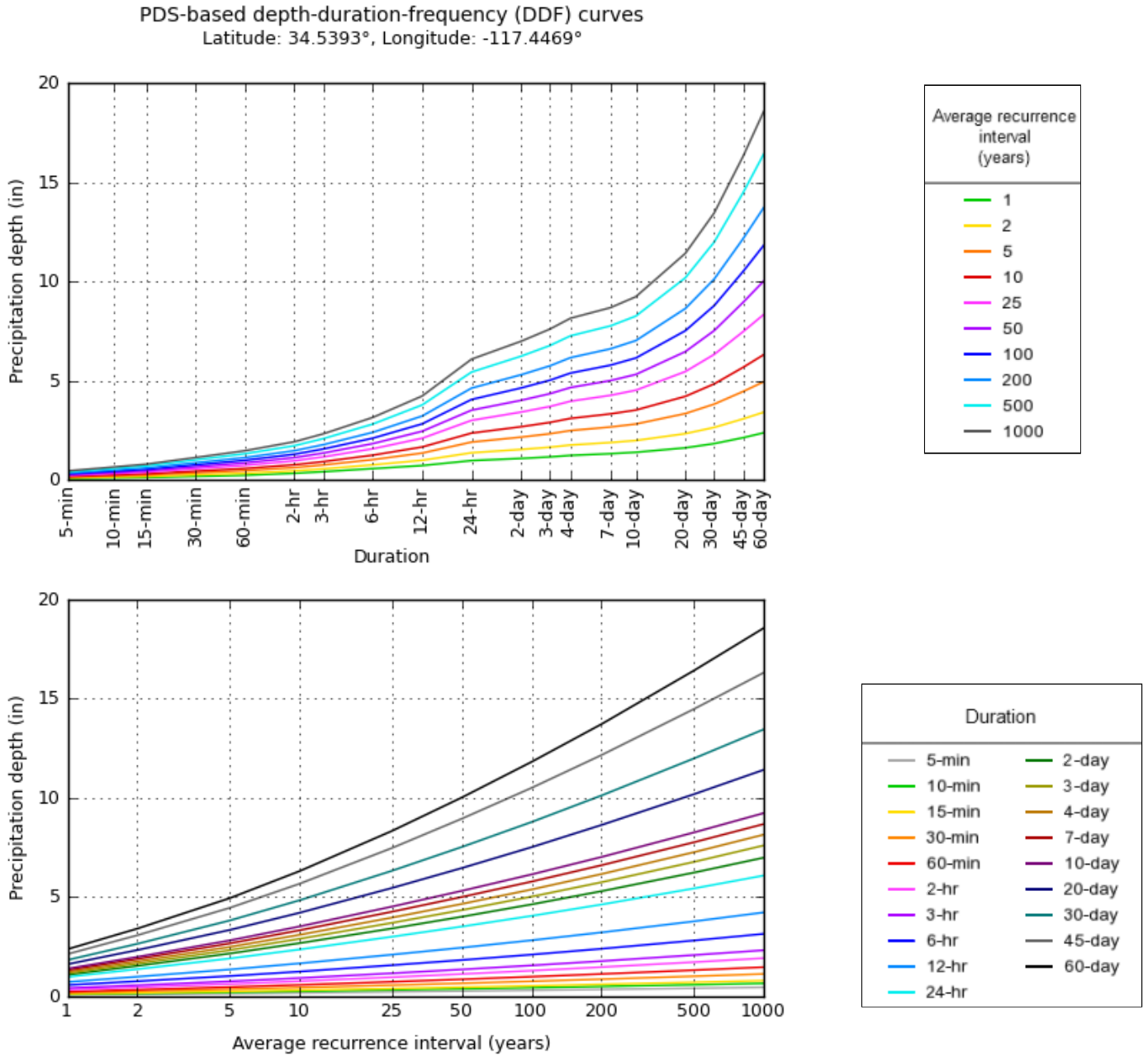
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



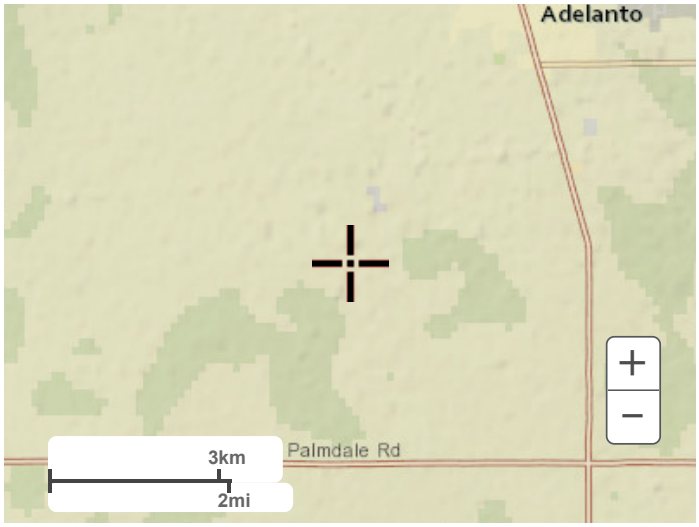
NOAA Atlas 14, Volume 6, Version 2

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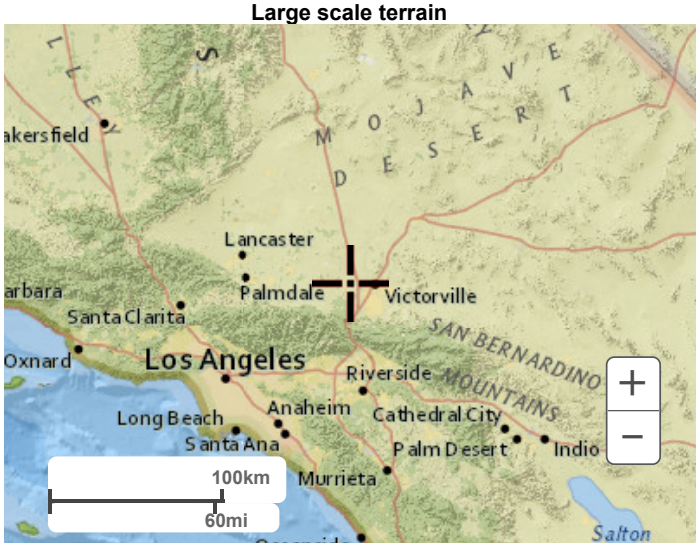
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Maps & aerials

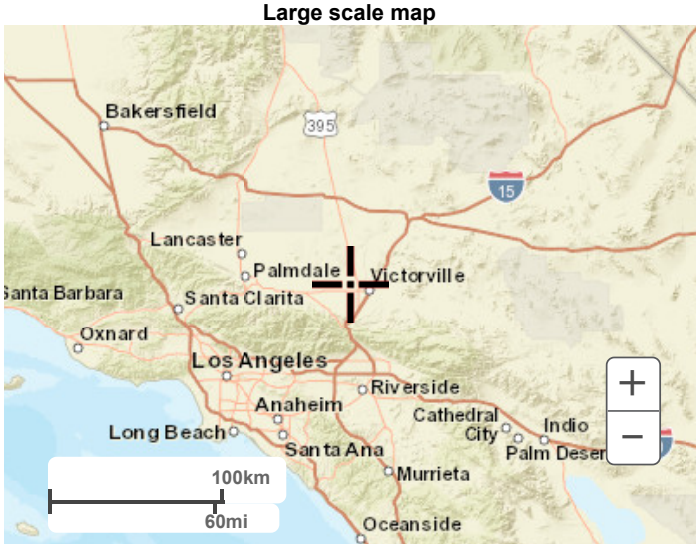
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Hydrologic Soil Group—San Bernardino County, California, Mojave River Area



Map Scale: 1:5,660 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 13, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 27, 2021—May 24, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
112	CAJON SAND, 0 TO 2 PERCENT SLOPES	A	91.3	60.6%
133	HELENDALE-BRYMAN LOAMY SANDS, 2 TO 5 PERCENT SLOPES*	A	59.3	39.4%
Totals for Area of Interest			**150.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Basin Volume

Engineer : Gabriel Marquez **Date:** 1/8/2025

Subject: Copart Racoon 66 (Watershed A1 and A2) **Project Number:** 1510-0002

Basin Storage Volume Calculations

100-year peak run-off = $Q_{Pre\text{-}Project}$ = 35.76 cfs

$Q_{Post\text{-}Project}$ = 48.69 cfs

The reduction target is 90% of peak increase

Q_1 = 0.90 (Qpost - Qpre)

= 11.64 cfs

Q_2 = ($Q_{post\text{-}Project}$ - Q_1)

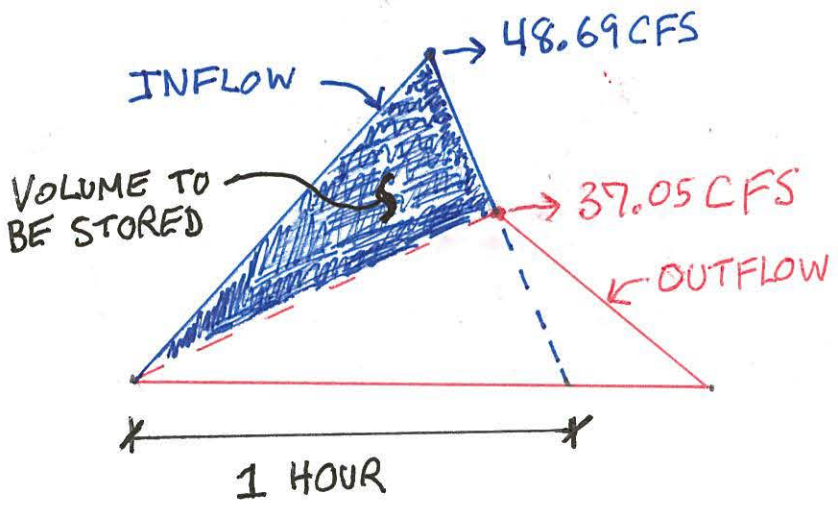
= 37.05 cfs

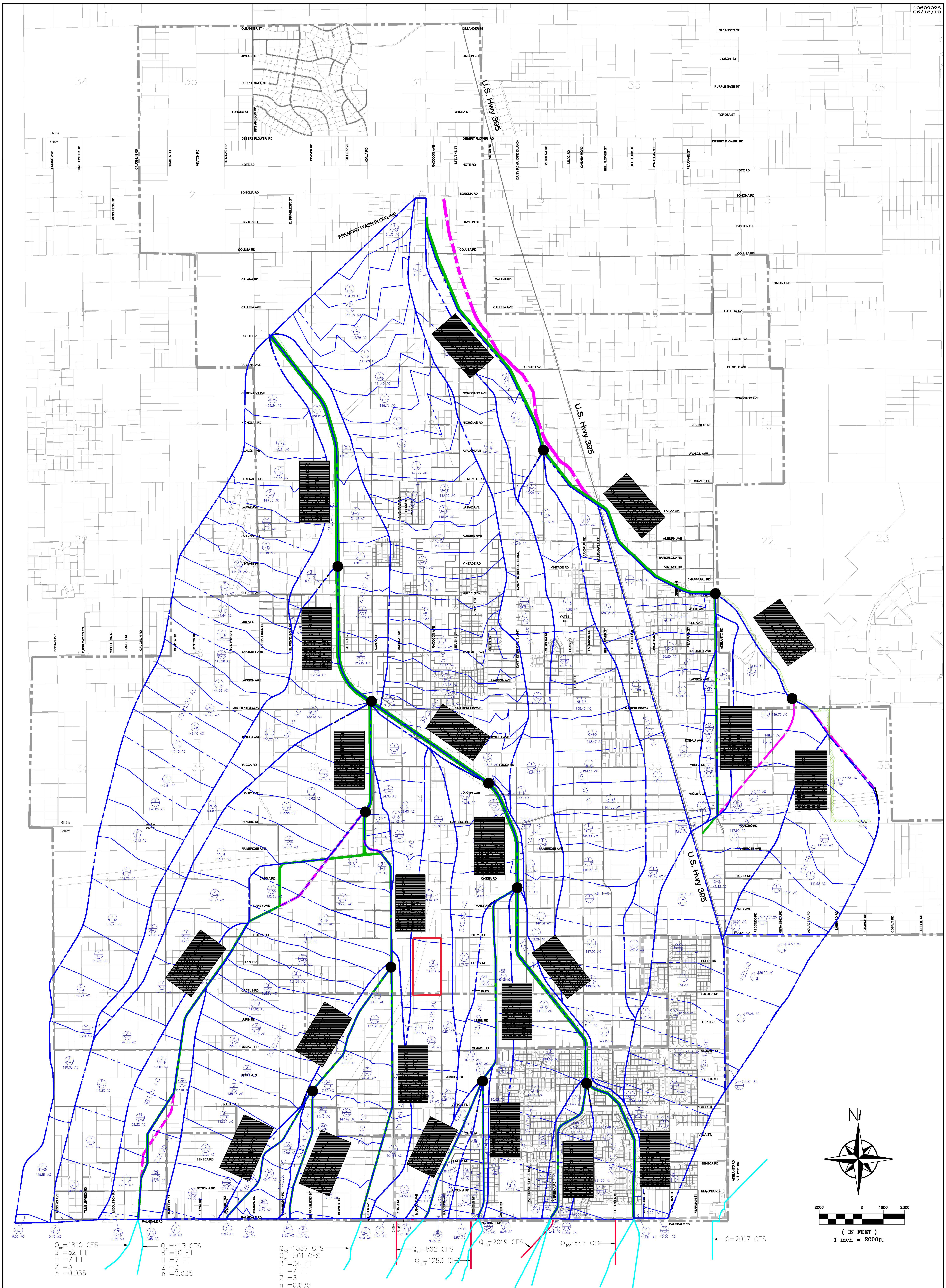
Volume Calculations

$$\text{Volume} = \frac{1 \times 3600 \frac{sec}{hr}}{2} \times (Qpost - Q_2)$$

Volume = 20,952 cf

= 0.48 acre-ft





LEGEND

- CHANNEL PER MASTER PLAN OF DRAINAGE
- OLD CHANNEL ALLIGNMENT
- CHANNEL TRIBUTARY AREAS
- TRIBUTARY SUB-AREAS
- CHANNEL NO., TRIB. AREA NO., SUBAREA NO., SUB AREA ACREAGE

PREPARED BY:
So & Associates Engineers Inc.

MAP FOR APPENDIX A
CHANNEL TRIBUTARY SUB-AREAS

CITY OF ADELANTO
DRAINAGE MASTER PLAN UPDATE

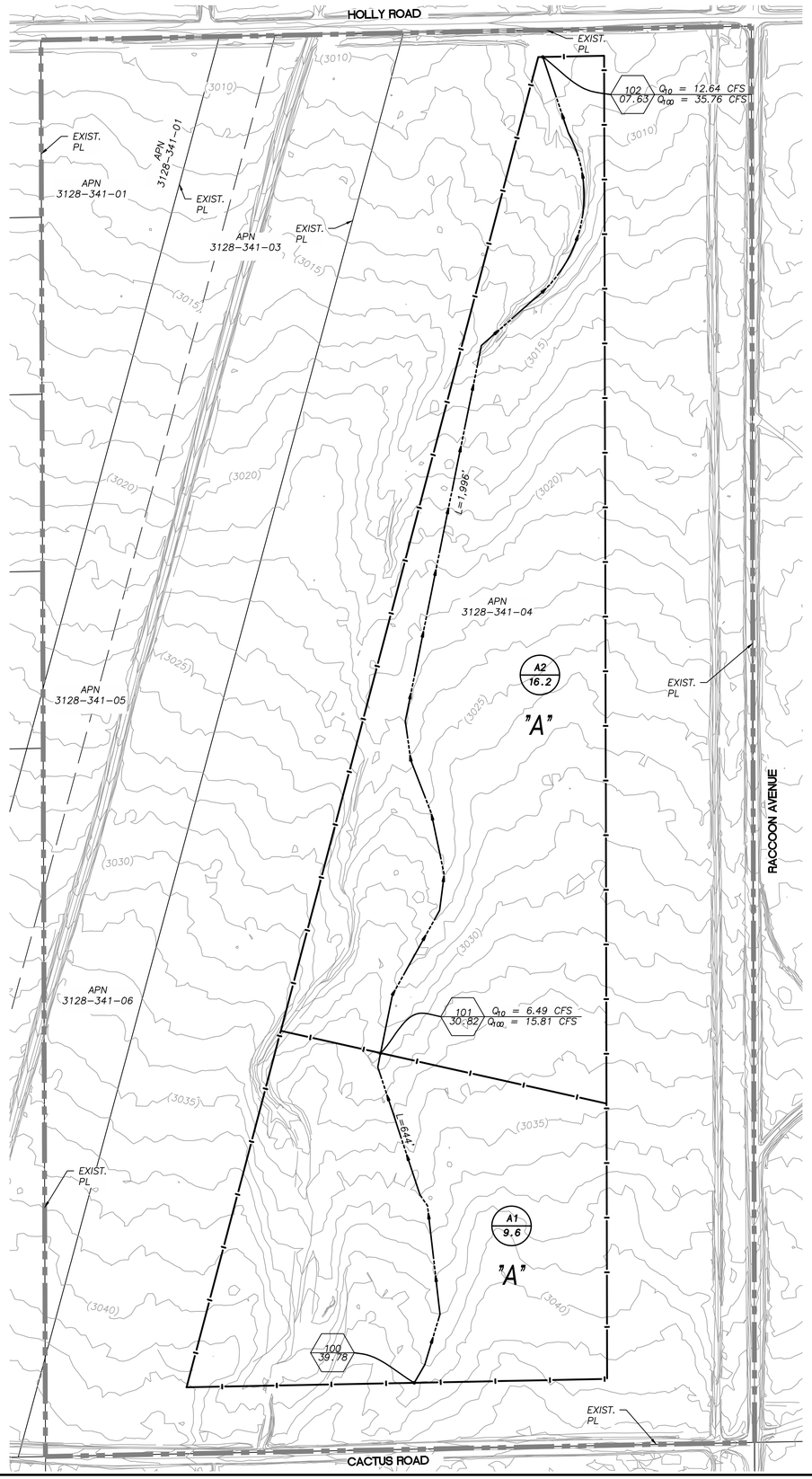
(FIGURE 1.0)

Tributary Area No.	Peak Flow[1] Q (cfs)		Study Area A (ac.)	Req. Retention Vol[2]; Q_{10} (cfs)	Required Drainage Channel Flow			Drainage Channel Design Data per Previous Master Plan[3]			Revised Drainage Channel Design Data[4]					
					Cum.(Q_{100} - Q_{10}) (cfs)	Q_{100} from VVDA & Baldy Mesa MPD (cfs)	Total Cum. Flow (cfs)	Flow Cap. (cfs)	Base Width (ft.)	Water Depth (ft.)	Design Flow (cfs)	Base Width[5] (ft.)	Normal Depth (ft.)	Critical Depth (ft.)	Channel Height[6] (ft.)	Top Width (ft.)
Channel 2																
Region 1	Q_{100}	299.10	296.58	141	158	647.00	805	5050	50	8.5	805	50	2	2	6	62
	Q_{10}	141.46														
						Flow from Channel 2A	2141									
Region 2	Q_{100}	116.40	135.87	62	54	-	3000	7450	80	8.5	3000	-	-	-	-	-
	Q_{10}	62.02														
Region 3	Q_{100}	1130.29	750.79	533	597	-	3597	7450	80	8.5	3597	80	4	4	9	98
	Q_{10}	533.25														
						Flow from Channel 2B	2501									
Region 4	Q_{100}	24.12	30.76	11	13	-	6111	9000	90	9.5	6111	90	5	5	10	111
	Q_{10}	10.91														
Region 5	Q_{100}	354.87	536.75	122	232	-	6343	9350	100	10	6343	-	-	-	-	-
	Q_{10}	122.39														
Region 6	[illegible]		871.18	450	649	-	6992	9350	100	10	6992	100	6	5	12	124
	Q_{10}	449.55														
Region 7	[illegible]		437.19	216	319	-	7311	14500	100	12.5	7311	-	-	-	-	-
	Q_{10}	215.69														
						Flow from Channel 3	6817									
Region 8	Q_{100}	638.70	801.04	242	397	-	14525	14500	100	12.5	14525	100	9	8	16	133
	Q_{10}	241.86														
Region 9	Q_{100}	373.52	630.87	144	229	-	14754	15000	100	12.5	14754	-	-	-	-	-
	Q_{10}	144.23														
Region 10	Q_{100}	373.52	225.44	44	330	-	15084	15000	100	12.5	15084	-	-	-	-	-
	Q_{10}	43.59														
Region 11	Q_{100}	2652.12	3519.09	1217	1435	-	16519	15000	100	12.5	16519	100	10	9	17	134
	Q_{10}	1217.17														
Fremont Wash																
Region 1	Q_{100}	3215.62	3086.01	1643	1573	-	Fremont Wash									
	Q_{10}	1642.71														

(FIGURE 1.1)

EXHIBIT A

HYDROLOGY MAP (EXISTING CONDITION; RATIONAL METHOD)



LEGEND

XXX / XX.X — NODE/CONCENTRATION POINT / ELEVATION	FLOW PATH
	WATERSHED BOUNDARY
XX / X.X — SUBAREA / ACRES	PROJECT BOUNDARY
L=XXX' — MAIN FLOW PATH	
"A" — HYDROLOGIC SOIL GROUP	

N

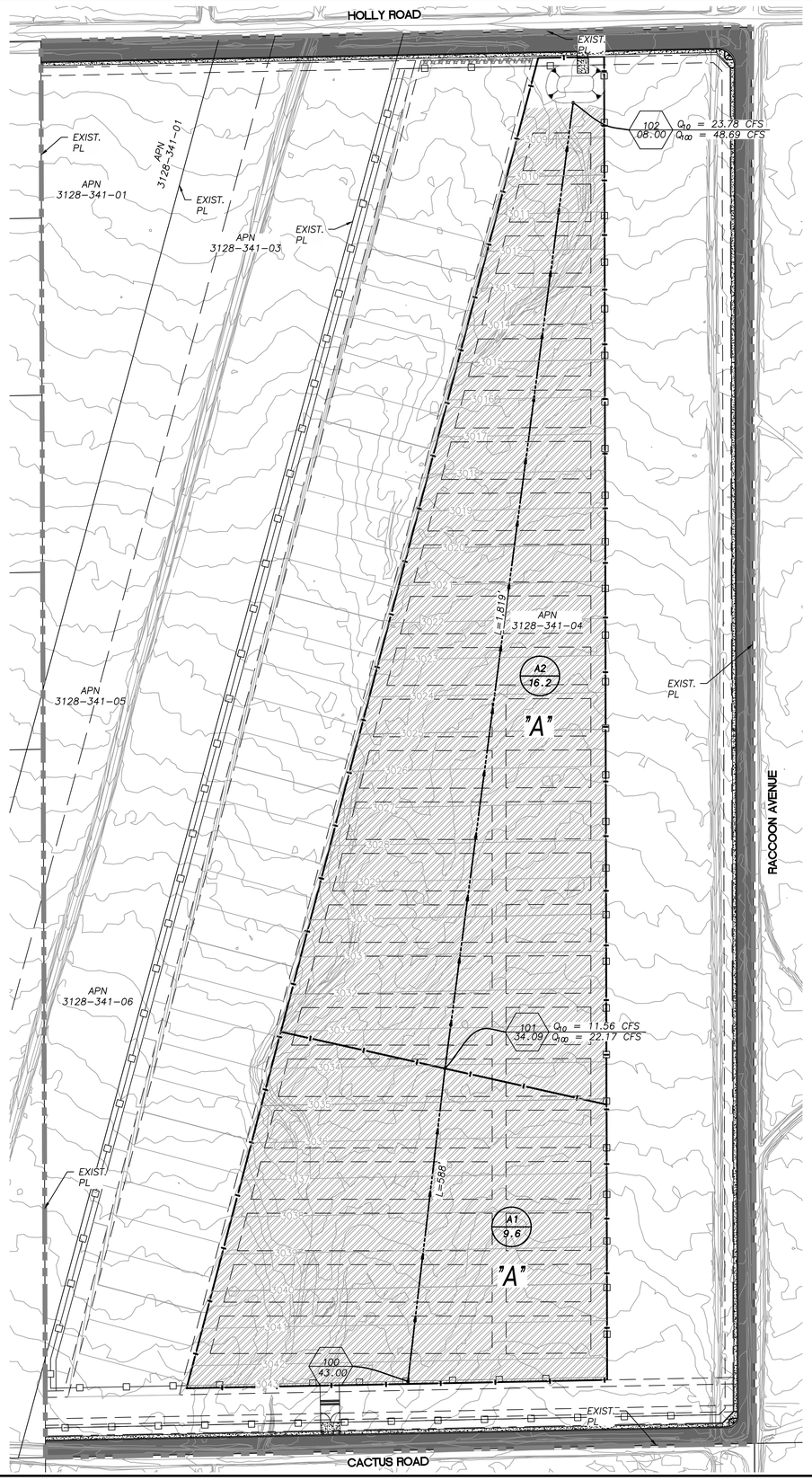
GRAPHIC SCALE
120 0 60 120 240
1" = 120'

EXHIBIT "A"
COPART 66
HYDROLOGY MAP FOR EXISTING CONDITION

CASC
Engineering and Consulting
1470 EAST COOLEY DRIVE, COLTON, CA 92324
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EXHIBIT B

HYDROLOGY MAP (PROPOSED CONDITION; RATIONAL METHOD)



LEGEND

- XXX / XX.X — NODE/CONCENTRATION POINT / ELEVATION
- XX / X.X — SUBAREA / ACRES
- L=XXX' — MAIN FLOW PATH
- "A" — HYDROLOGIC SOIL GROUP
- FLOW PATH
- WATERSHED BOUNDARY
- PROJECT BOUNDARY
- PROPOSED PCC PAVING
- PROPOSED AC PAVEMENT
- PROPOSED 4" GRAVEL OVER 6" CLASS II BASE
- PROPOSED GEOWEB CHANNEL
- PROPOSED RIP-RAP

N

GRAPHIC SCALE
120 0 60 120 240
1" = 120'

EXHIBIT "B"
COPART 66
HYDROLOGY MAP FOR PROPOSED CONDITION

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APPENDIX I
Racoon Avenue Noise Impact Analysis

a

RACOON AVENUE

NOISE IMPACT ANALYSIS

CITY OF ADELANTO

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APRIL 24, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
NR	Noise Reduction
Project	Racoon Avenue
REMEL	Reference Energy Mean Emission Level
TNM	Traffic Noise Model
STC	Sound Transmission Class

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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise abatement measures for the proposed Racoon Avenue development ("Project"). The Project site is located on the corner of Holly Road and Racoon Avenue in the City of Adelanto. The project is to consist of sixty-six acres of land, and the project will include the development of a parking lot to store wrecked vehicles. This noise impact analysis was prepared to satisfy the City of Adelanto noise level standards and ensure that adequate noise abatement measures are incorporated into the Project's development. In addition, recommendations for exterior and interior noise abatement are identified based on the latest Project site plans.

OPERATIONAL NOISE

Using reference noise levels to represent the expected noise sources from the Project, this analysis estimates the Project-related stationary-source operational noise levels at nearby receiver locations. The typical activities associated with the Project are anticipated to include outdoor storage activities, gate activity and receiving area activities. Project operational noise levels are expected to range from 28.9 to 40.8 dBA L_{eq} during the daytime hours and nighttime. Thus, the operational noise analysis shows that Project activities will satisfy the City of Adelanto Municipal Code daytime and nighttime exterior noise threshold of 65 dBA L_{eq} at all receiver locations.

Further, the Project is not anticipated to generate a perceptible noise level increase at nearby receiver locations during daytime or nighttime operations. Thus, this analysis demonstrates that the Project operational noise levels will not contribute a long-term operational noise level impact to the existing ambient noise environment at any of the sensitive receiver locations. Therefore, the operational noise level impacts associated with the proposed 24-hour seven days per week Project activities, such as the outdoor storage activities, gate activity and receiving area activities, are considered less than significant.

CONSTRUCTION NOISE IMPACTS

Using sample reference noise levels to represent the planned construction activities of the Project site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. Since the City of Adelanto General Plan and Municipal Codes do not identify specific construction noise level thresholds, an hourly average L_{eq} threshold is identified based on the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* for noise sensitive residential use. The Project-related short-term construction noise levels are expected to approach 50.2 dBA L_{eq} and will satisfy the 80 dBA L_{eq} construction noise level threshold at all receiver locations. Additionally, construction activities are planned to typically occur between 7:00 a.m. to 7:00 p.m. except on Sundays and Federal holidays and would comply with the City of Adelanto limitation on allowable hours of construction. Therefore, based on the results of this analysis, all nearby sensitive receiver locations will experience less than significant impacts due to Project construction noise levels.

CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures, and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. Ground-borne vibration levels resulting from typical construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). At the nearest receivers Project construction vibration levels are expected to be less than 0.01 PPV (in/sec). Based on maximum acceptable vibration threshold of 0.20 PPV (in/sec), the typical Project construction vibration levels will comply with Caltrans vibration thresholds at all receiver locations and vibration impacts would be less than significant.

SUMMARY OF CEQA SIGNIFICANCE FINDINGS

The results of this Racoon Avenue Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)(1) Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic	6	*Less Than Significant*	-
Operational Noise	8	*Less Than Significant*	-
Construction Noise	9	*Less Than Significant*	-
Construction Vibration		*Less Than Significant*	-

1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Racoon Avenue development ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures noise analysis, evaluates the potential noise impacts from operation and construction of the Project, and as necessary, identifies mitigation measures to reduce impacts.

1.1 SITE LOCATION

The proposed Racoon Avenue site is located on the corner of Holly Road and Racoon Avenue in the City of Adelanto, as shown on Exhibit 1-A. The Project site is located approximately 5.1 miles southwest of Southern California Logistics Airport and approximately 2 miles north of Interstate 18.

1.2 PROJECT DESCRIPTION

The Project will include the development of a parking lot to store wrecked vehicles. The Project site is shown on Exhibit 1-B. The typical activities associated with the Project are anticipated to include outdoor storage activities, gate activity and receiving area activities.

EXHIBIT 1-A: LOCATION MAP

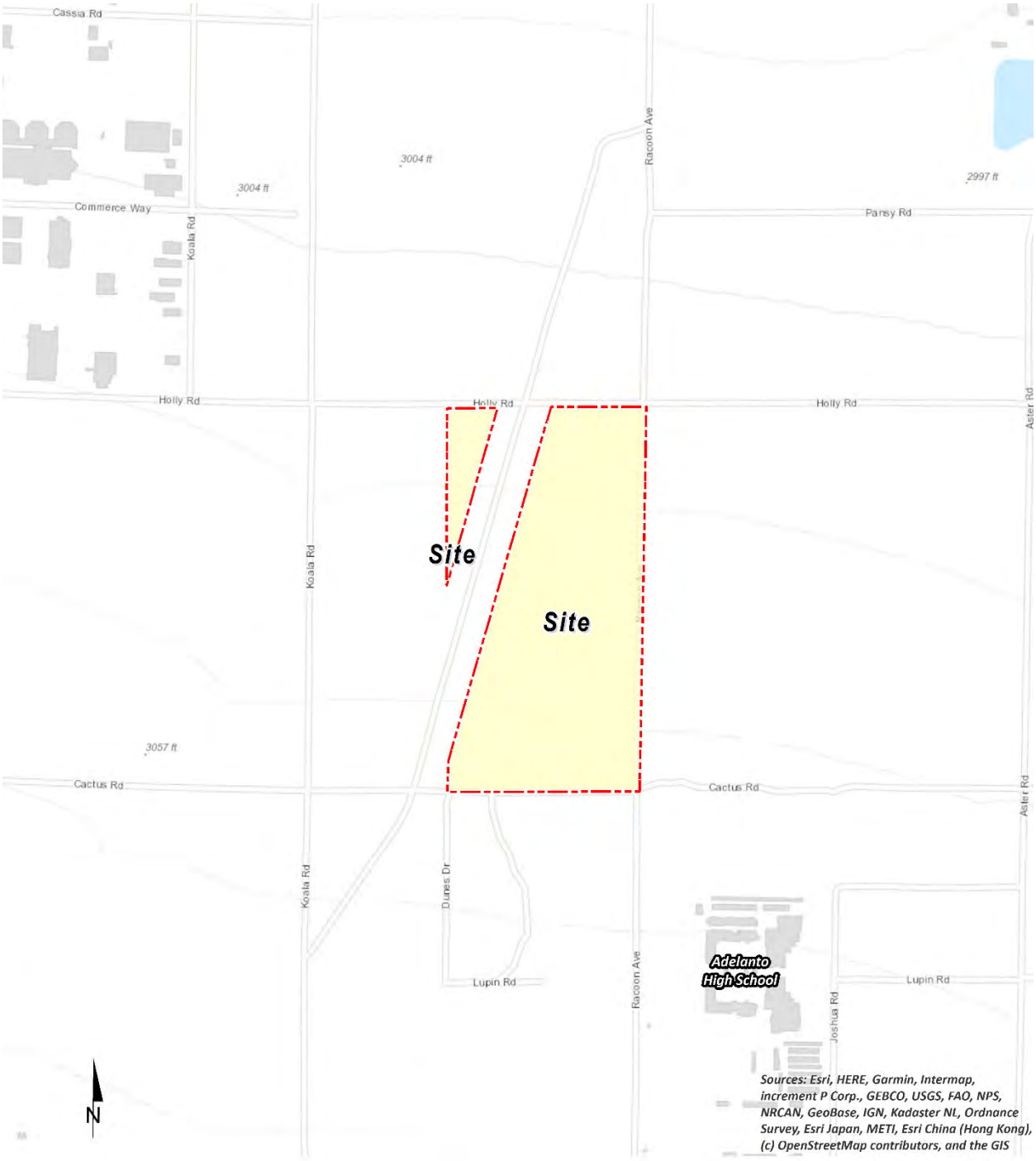


EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period (typically one hour) and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Adelanto relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually

sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure (4).

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by up to 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source (4).

2.6 LAND USE COMPATIBILITY WITH NOISE

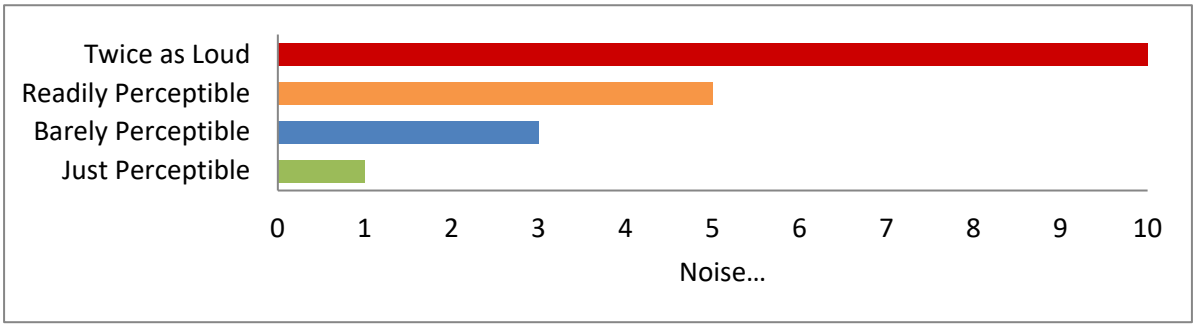
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized (5).

2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (6 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (7) According to research originally published in the Noise Effects Handbook (6), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (8)

Exhibit 2-B: Noise Level Increase Perception



2.8 VIBRATION

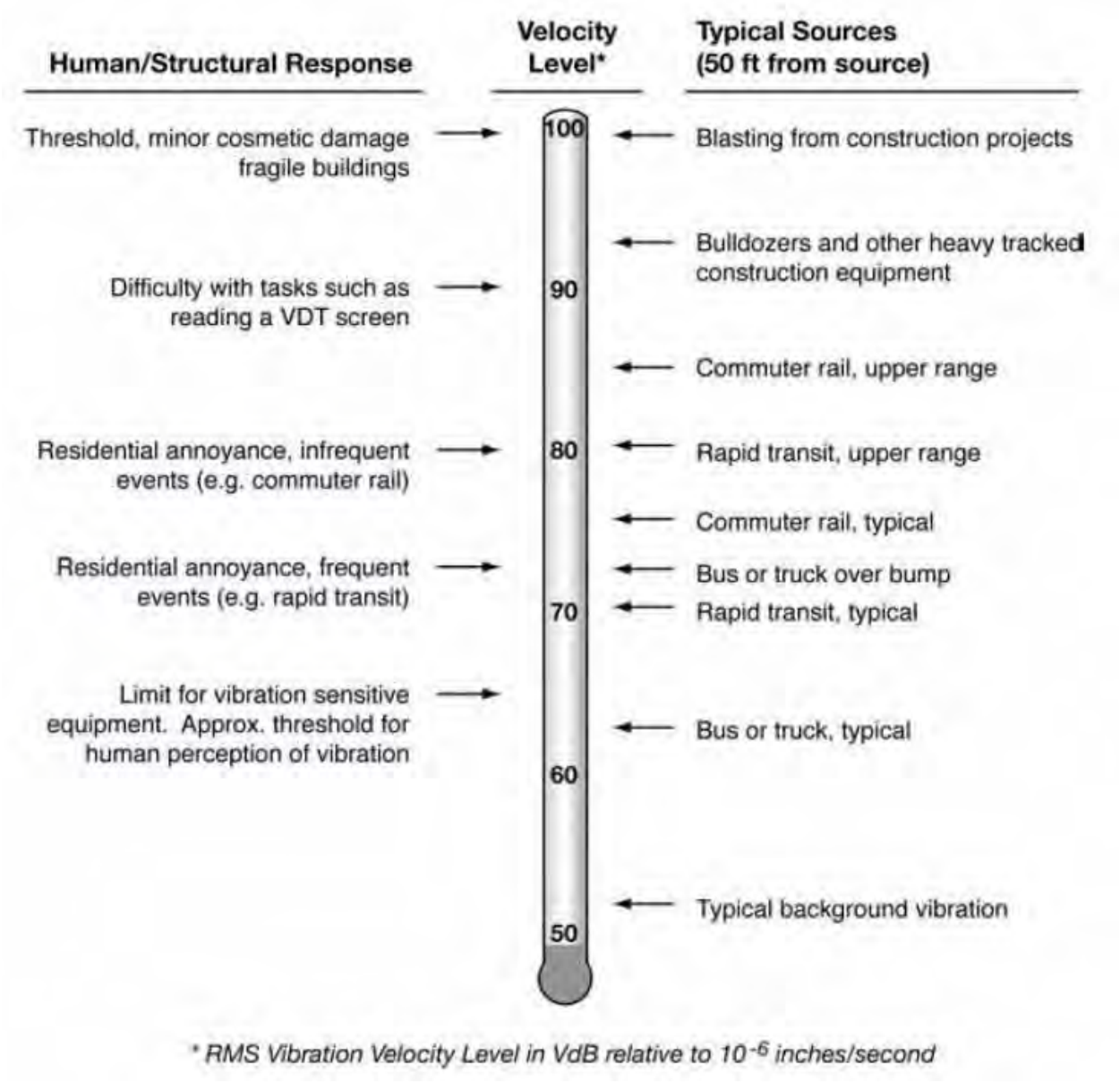
Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (9), vibration is the periodic oscillation of a medium or object. Vibration is the periodic

oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude can be calculated from the PPV. The RMS amplitude is approximately 70% of the PPV (10). Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment and/or activities.

While not universally accepted, vibration decibel notation (VdB) is used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels (11). As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



Source: Federal Transit Administration (FTA) Transit Noise Impact and Vibration Assessment Manual

3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research. (12) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF ADELANTO GENERAL PLAN NOISE ELEMENT

The City of Adelanto has adopted General Plan Noise Element with the purpose of providing *information for programs to control and abate environmental noise and to protect the citizens of Adelanto from excessive exposure to noise.* (13) To achieve its purpose, the Noise Element identifies goals, policies, and implementation strategies related to noise. However, for the purpose of this analysis, a City's Municipal Code typically identifies the noise level standards necessary to evaluate potential impacts due to stationary noise sources at nearby noise-sensitive receiver locations in a Project study area.

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Racoon Avenue, operational noise that may include outdoor storage activities, gate activity and receiving area activities are typically evaluated against standards established under a City's Municipal Code. The City of Adelanto Municipal Code, Section 17.90.020[b][1] indicates that the General Plan Noise Element, Table VIII-2 Land Use Compatibility Guidelines Related to Noise Exposure *shall apply* to land uses city-wide and shall be used to define acceptable and unacceptable noise levels. The lowest exterior noise level criteria identified for the noise-sensitive residential and public use (e.g., school) in the Project study area in Table VIII-2 of the General Plan Noise Element is 65 dBA L_{eq}. (13) The City of Adelanto Municipal Code noise standards are included in Appendix 3.1.

3.4 CONSTRUCTION NOISE STANDARDS

To control noise impacts associated with the construction of the proposed Project, the City has established limits to the hours of operation and construction practices in the City of Adelanto Municipal Code, Section 17.90.020[d]. The Municipal Code indicates that construction, shall be limited to the hours of 7:00 a.m. to dusk on weekdays; with no activity allowed on weekends or holidays without prior consent from the Building Official. (14) In addition, the Municipal Code requires the following construction practices be listed as *general notes* on Project construction drawings:

(1) Construction activity and equipment maintenance is limited to the hours between 7:00 a.m. to dusk on weekdays. Construction may not occur on weekends or State holidays, without prior consent of the Building Official. Non-noise generating activities (e.g. interior painting) are not subject to these restrictions. City and State construction projects, such as road re-building or resurfacing, and any construction activity that is in response to an emergency, shall be exempt from this requirement.

(2) Stationary construction equipment that generates noise in excess of sixty-five (65) dBA at the project boundaries must be acoustically shielded and located at least one hundred feet (100') from occupied residences. The equipment area with appropriate acoustic shielding shall be designated on building and grading plans. Equipment and shielding shall remain in the designated location throughout construction activities.

(3) Construction routes are limited to City of Adelanto designated truck routes.

(4) Water trucks or sprinkler systems shall be used during clearing, grading, earth moving, excavation, or transportation of cut or fill materials to prevent dust from leaving the site and to create a crust after each day's activities cease. At a minimum, this would include wetting down such areas in the later morning and after work is completed for the day and whenever wind exceeds fifteen (15) miles per hour.

(5) A person or persons shall be designated to monitor the dust control program and to order increased watering as necessary to prevent transport of dust off-site. The name and telephone number of such person(s) shall be provided to the City.

(6) All grading equipment shall be kept in good working order per factory specifications.

To evaluate the Project construction noise activities Section 17.90.020[d][2] requires that construction equipment shall not generate noise exceeding 65 dBA L_{eq}. Therefore, for the construction equipment noise analysis presented in this report, the threshold of 65 dBA L_{eq} is used to assess the potential noise impacts due to Project construction at nearby sensitive receiver locations.

3.5 CONSTRUCTION VIBRATION STANDARDS

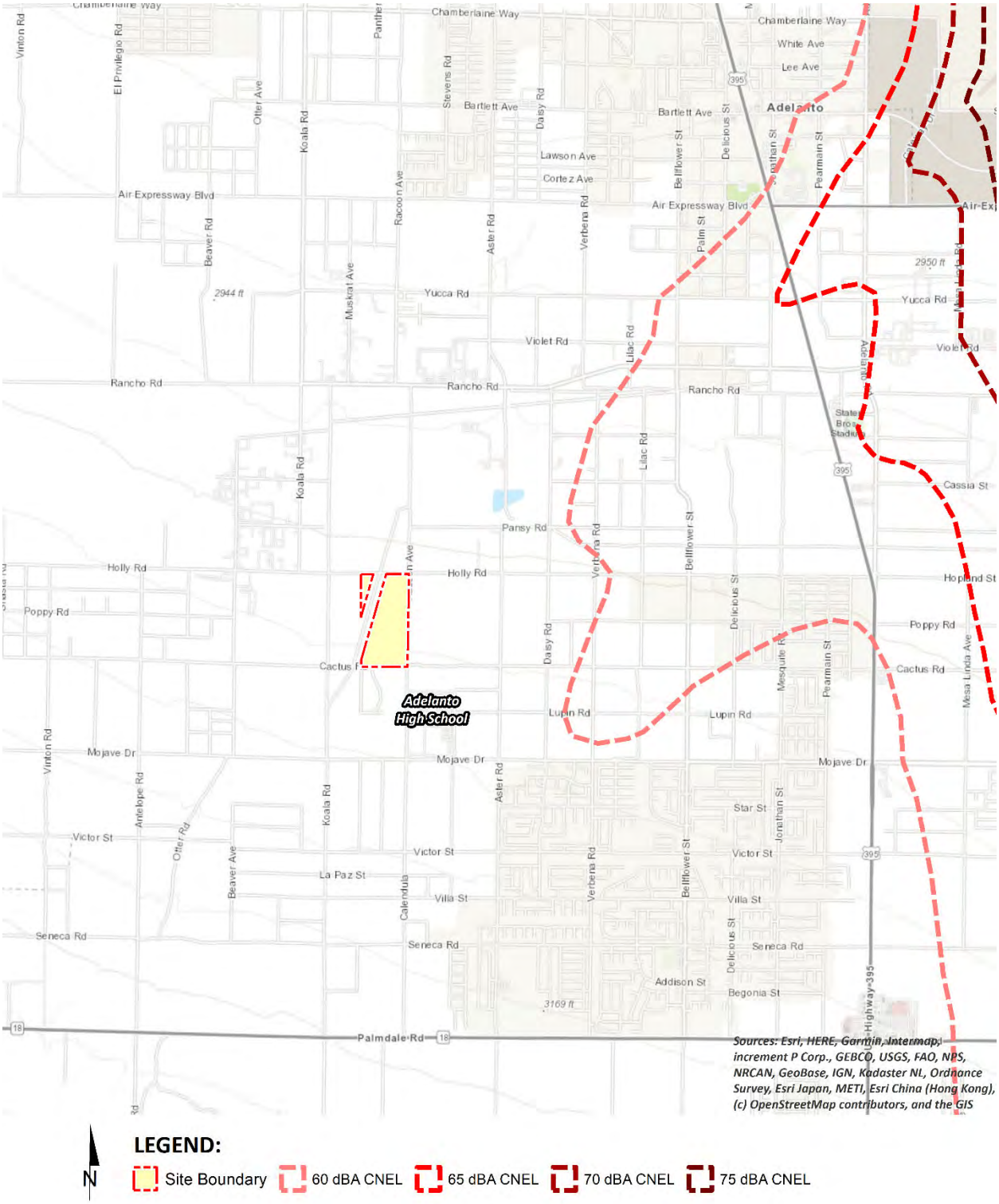
Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration (7). To analyze vibration impacts originating from the operation and construction of the Racoon Avenue project, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist.

The City of Adelanto Municipal Code, Section 17.90.030 *Vibration* (Appendix 3.1), identifies a vibration level standard of 0.2 in/sec PPV. (14) Therefore, for the construction equipment vibration analysis presented in this report, the threshold of 0.2 in/sec PPV is used to assess the potential vibration impacts due to Project construction at nearby sensitive receiver locations.

3.6 SOUTHERN CALIFORNIA LOGISTICS AIRPORT LAND USE COMPATIBILITY

The closest airport to the Project site is the Southern California Logistics Airport (SCLA) located roughly 4 miles to the northeast and has the potential to expose the Project site to aircraft-related exterior noise levels. Therefore, the *Southern California Logistics Airport Comprehensive Land Use Plan* future noise level contour boundaries are used in this noise study to determine the land use compatibility of the Project. (15) Exhibit 3-A of this report shows the future SCLA noise level contour boundaries in relation to the Project site, and indicates that the Project site falls well outside the 60 CNEL contour boundaries. Based on the criteria described on Page 2-13 of the *SCLA Comprehensive Land Use Plan,* the 65 dBA CNEL contour is established as the threshold of incompatibility, and *noise levels below 65 dBA CNEL are considered compatible with underlying land uses*. (15) Therefore, since the Project site is located outside the 65 dBA CNEL contour boundaries of SCLA, and will not experience aircraft-related noise levels greater than 65 dBA CNEL, the Project's development is considered compatible use per the *SCLA Comprehensive Land Use Plan*, and no further analysis is required.

EXHIBIT 3-A: SCLA FUTURE AIRPORT NOISE CONTOURS



4 SIGNIFICANCE CRITERIA

The following significance criteria are based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

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?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

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?

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders a noise impact significant.* (16) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

The Federal Interagency Committee on Noise (FICON) (17) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders a noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (16) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any

increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of a substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (8 p. 9) and Caltrans (18 p. 2_48).

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, for the vibration impacts originating from the construction of the Racoon Avenue, vibration-generating activities are appropriately evaluated using the of 0.2 in/sec PPV threshold outlined in the City of Adelanto Municipal Code, Section 17.90.030.

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The closest airport which would require additional noise analysis under CEQA guideline C is the SCLA located approximately 4 miles northeast of the Project site. As previously indicated in Section 3.6, the Project site is located outside the 65 dBA CNEL contour boundaries of SCLA. Therefore, the airport noise impacts are considered *less than significant,* and no further noise analysis is required under CEQA Noise Threshold C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary that includes the allowable criteria used to identify potentially significant incremental noise level increases.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Operational	Residential	Exterior Noise Level Limit[1]	65 dBA L_{eq}	65 dBA L_{eq}
	Noise-Sensitive[2]	if ambient is < 60 dBA L_{eq}	≥ 5 dBA L_{eq} Project increase	
		if ambient is 60 - 65 dBA L_{eq}	≥ 3 dBA L_{eq} Project increase	
		if ambient is > 65 dBA L_{eq}	≥ 1.5 dBA L_{eq} Project increase	
Construction	Noise-Sensitive	Noise Level Threshold[3]	65 dBA L_{eq}	n/a
		Vibration Level Threshold[4]	0.2 PPV in/sec	n/a

[1] City of Adelanto Municipal Code Section 17.90.020[b][1] (Appendix 3.1)
[2] FICON, 1992.
[3] City of Adelanto Municipal Code Section 17.90.020[d][2] (Appendix 3.1)
[4] City of Adelanto Municipal Code Section 17.90.030 (Appendix 3.1)
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m. "n/a" = construction activities are not planned during the nighttime hours; "PPV" = peak particle velocity.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at three locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, October 12, 2022. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (19)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (2) Further, FTA guidance states, t*hat it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*. (7)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (7) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels

and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

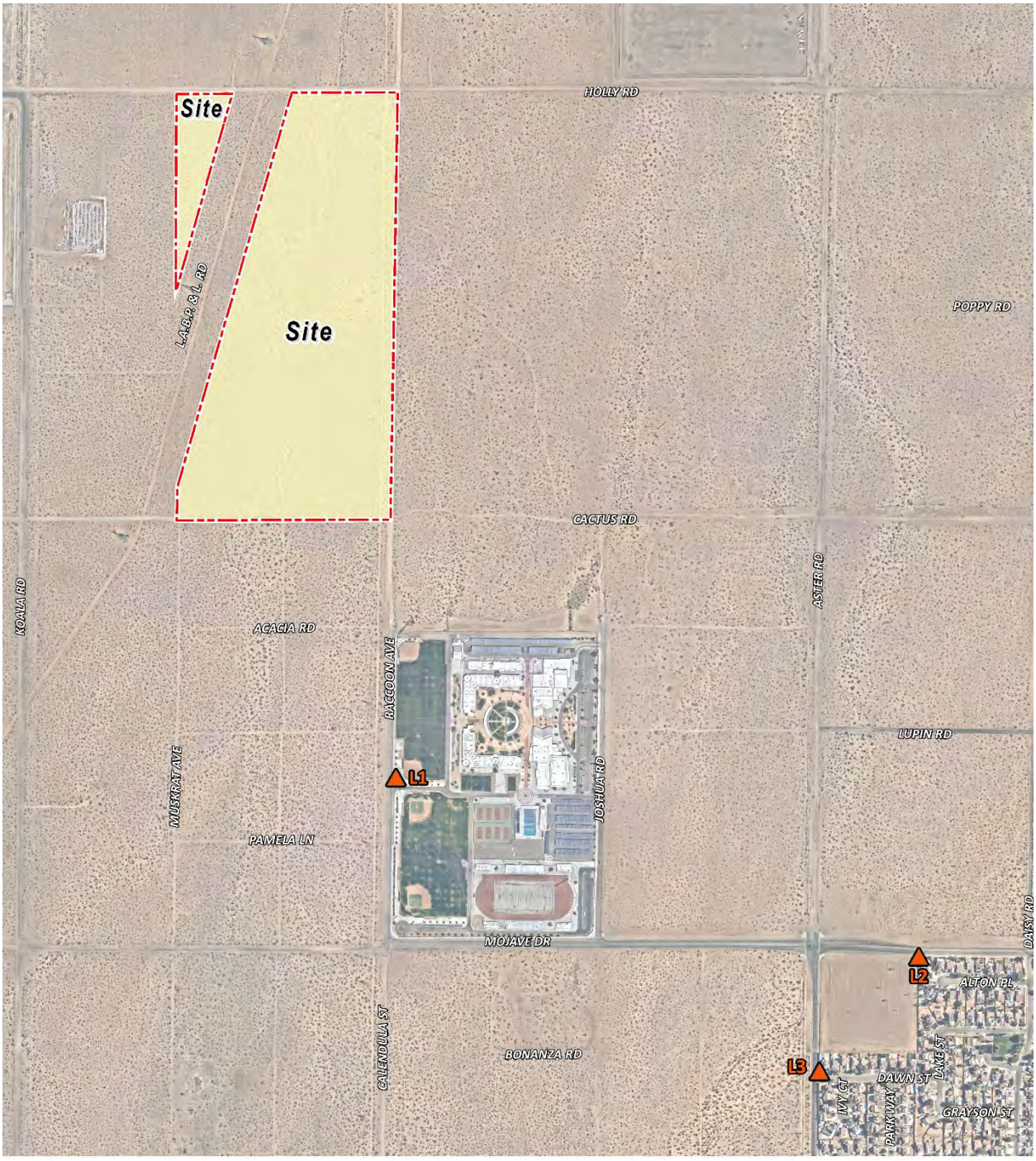
TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located southeast of the Project site near the Adelanto High School at 15620 Joshua Road.	58.4	53.0
L2	Located southeast of the Project near the existing single-family residence at 10608 Anton Place.	49.7	45.4
L3	Located southeast of the Project site near the existing single-family residence at 10512 Dawn St.	56.0	48.7

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2. "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 OFF-SITE SENSITIVE RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 6-A, were identified as representative locations for analysis. While a receptor represents an existing noise sensitive area, a receiver represents a single point in a noise prediction model that can represent one receptor or multiple receptors. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

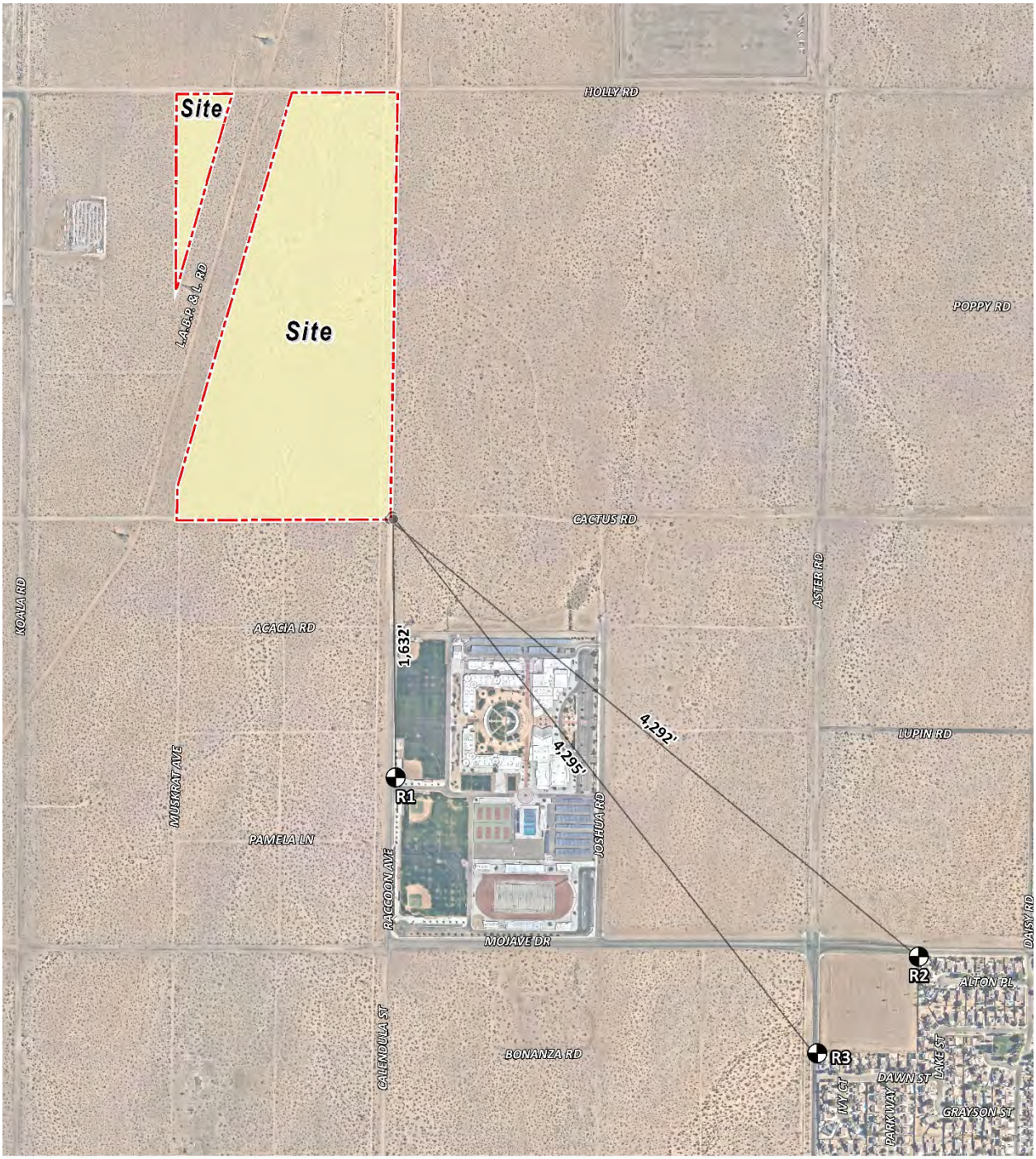
To describe the potential off-site Project noise levels, three receiver locations in the vicinity of the Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Due to the additional attenuation from distance and the shielding of intervening structures, other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

R1: Location R1 represents existing Adelanto High School at 15620 Joshua Road, approximately 2,721 feet southeast of the Project site. Receiver R1 is placed at the northwest corner of the sports field area just east of Calendula Road. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the existing noise sensitive residence located at 10608 Anton Place, approximately 6,452 feet southeast of the Project site. Receiver R2 is placed at the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing noise sensitive residence located at 10512 Dawn Street, approximately 6,390 feet southeast of the Project site. Receiver R3 is placed at the private outdoor living area (backyard) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

EXHIBIT 6-A: RECEIVER LOCATIONS



7 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 6, resulting from the operation of the proposed Racoon Avenue Project. Exhibit 7-A identifies the noise source locations used to assess the operational noise levels.

7.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the typical daytime and nighttime activities at the Project site. The on-site Project-related noise sources are expected to include: outdoor storage activities, gate activity and receiving area activities. The proposed hours of operation for the facility are expected to be limited to the daytime hours between 7 a.m. to 7 p.m. Monday through Friday.

7.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 7-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the outdoor storage activities, gate activity and receiving area activities all operating at the same time. These sources of noise activity will likely vary throughout the day.

7.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (19)

EXHIBIT 7-A: OPERATIONAL NOISE SOURCE LOCATIONS

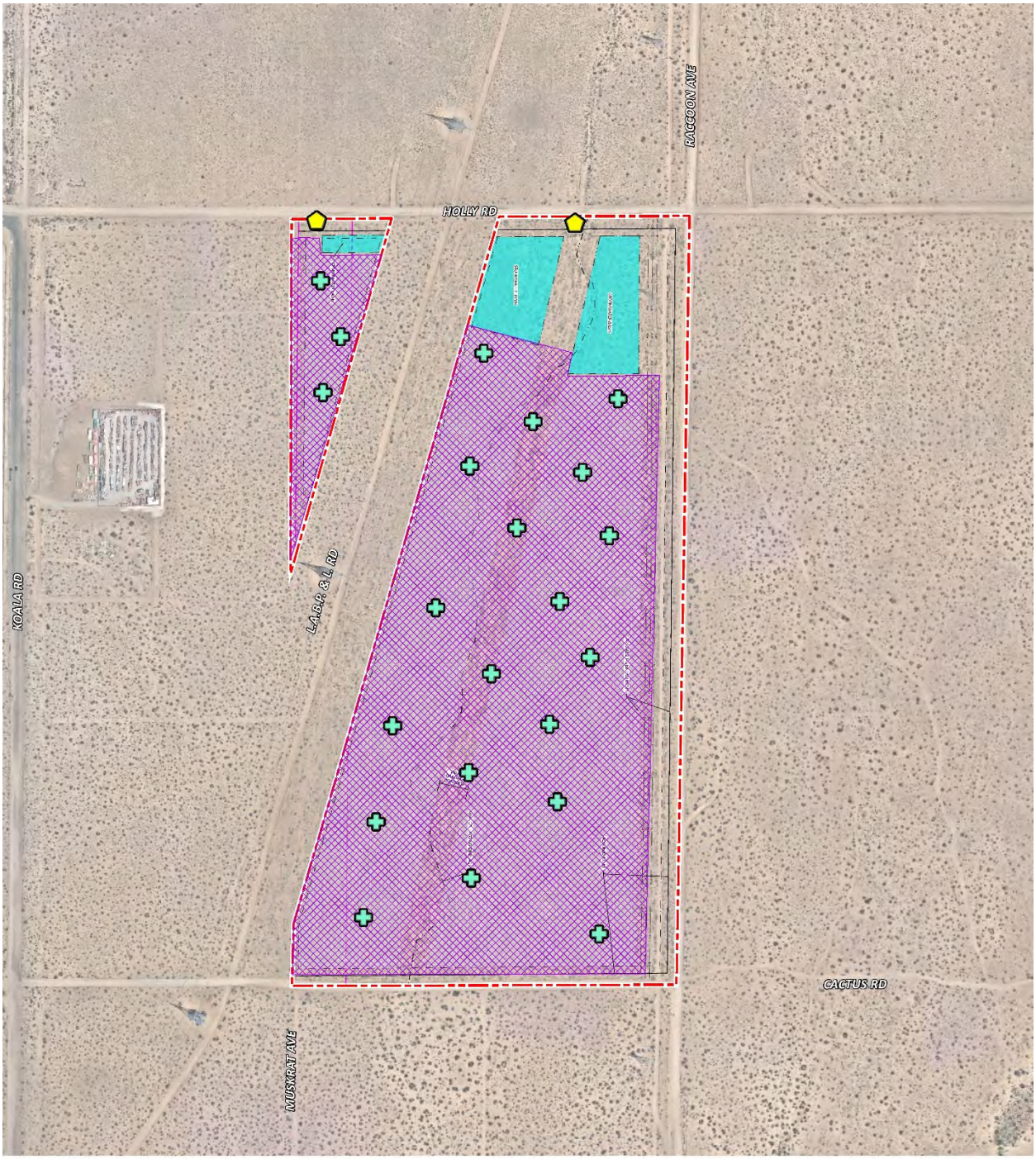


TABLE 7-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source[1]	Noise Source Height (Feet)	Min./ Hour[2]		Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)[3]
		Day	Night		
Outdoor Storage Activity	6'	60	0	61.7	93.4
Gate Activity	6'	60	0	61.6	93.3
Receiving Area	10'	60	0	68.5	100.2

[1] As measured by Urban Crossroads, Inc. at the Copart Auto Auction facility located at 12167 Arrow Route in Rancho Cucamonga.
[2] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

7.2.2 OUTDOOR STORAGE ACTIVITY

To determine the noise level impacts associated with outdoor storage activity within the project site short-term reference noise level measurements were collected by Urban Crossroads, Inc. at an existing Copart Auto Auction facility located at 12167 Arrow Route in the City of Rancho Cucamonga. The reference noise level measurement indicates that the outdoor storage activity generates noise levels of 61.7 dBA L_{eq} at 50 feet. Outdoor storage activity mainly consists of forklifts moving through the site to pick up automobiles and move them through the lot. This includes forklift engine noises, backup alarms, and lifting cars as sources of noise.

7.2.3 GATE ACTIVITY

To determine the noise level impacts associated with gate activity within the project site reference noise level measurements were collected by Urban Crossroads, Inc. at an existing Copart Auto Auction facility located at 12167 Arrow Route in the City of Rancho Cucamonga. The reference noise level measurement indicates that the gate activity generates noise levels of 61.6 dBA L_{eq} at 50 feet. The gate activity reference noise level includes the movement of forklifts and tow trucks through the gate honking as a vehicle enters or exits.

7.2.3 RECEIVING AREA ACTIVITY

To assess the impacts created by receiving area activity, reference noise levels measurements were taken by Urban Crossroads, Inc. at an existing Copart Auto Auction facility located at 12167 Arrow Route in the City of Rancho Cucamonga. The reference noise level represents a standard sedan being loaded onto the back of a flatbed tow truck with a forklift, the noise levels were measured at 68.5 dBA L_{eq}. The receiving area activity includes idle engine noise from the tow truck, forklift movement, noise created from placing the automobile onto the back of the tow truck, drivers talking to each other, and horns from each vehicle.

7.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 8.2 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

7.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include outdoor storage activities, gate activity and receiving area activities, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Since the Project is assumed to have the same operating schedule day and night, there is not differentiation in the noise levels during these different periods. As shown in Table 7-2, the Project operational noise levels at the off-site receiver locations are expected to range from 28.9 to 40.8 dBA L_{eq} during the daytime and nighttime hours.

TABLE 7-2: PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)		
	R1	R2	R3
Outdoor Storage Activity	34.0	22.6	22.5
Gate Activity	0.0	0.0	0.0
Receiving Area	39.8	28.0	27.8
Total (All Noise Sources)	**40.8**	**29.1**	**28.9**

[1] See Exhibit 7-A for the noise source locations. CadnaA noise model calculations are included in Appendix 7.1.

7.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Adelanto exterior noise level standards at nearby noise-sensitive receiver locations. Table 7-4 shows the operational noise levels associated with Racoon Avenue Project will not exceed the daytime and nighttime exterior noise level standards.. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

TABLE 7-4: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]	Noise Level Standards (dBA Leq)[3]	Noise Level Standards Exceeded?[4]
R1	40.8	65.0	No
R2	29.1	65.0	No
R3	28.9	65.0	No

[1] See Exhibit 6-A for the receiver locations.
[2] Proposed Project operational noise level calculations are included in Appendix 7-1.
[3] City of Adelanto Municipal Code Section 17.90.020[b][1] (Appendix 3.1)
[4] Do the estimated Project operational noise source activities exceed the noise level standards?

7.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearest receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \ldots 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing

ambient noise environment. As indicated on Tables 8-5 and 8-6, the Project will generate noise level increases ranging up to 0.1 dBA L_{eq} during the daytime and up to 0.3 dBA L_{eq} during the nighttime at the nearest receiver locations. Thus, Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented on Table 4-1. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.

TABLE 7-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	40.8	L1	58.4	58.5	0.1	5.0	No
R2	29.1	L2	49.7	49.7	0.0	5.0	No
R3	28.9	L3	56.0	56.0	0.0	5.0	No

[1] See Exhibit 6-A for the receiver locations.
[2] Total Project daytime operational noise levels as shown on Table 7-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

TABLE 7-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	40.8	L1	53.0	53.3	0.3	5.0	No
R2	29.1	L2	45.4	45.5	0.1	5.0	No
R3	28.9	L3	48.7	48.7	0.0	5.0	No

[1] See Exhibit 6-A for the receiver locations.
[2] Total Project daytime operational noise levels as shown on Table 7-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

8 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 8-A shows the construction noise source locations in relation to the nearest sensitive receiver locations previously described in Section 6. To control noise impacts associated with the construction of the proposed Project, the City of Adelanto has limited construction to the hours of 7:00 a.m. to dusk on weekdays; with no activity allowed on weekends or holidays without prior consent from the Building Official. (14) In addition, to evaluate the Project construction noise activities Municipal Code Section 17.90.020[d][2] requires that construction equipment shall not generate noise exceeding 65 dBA L_{eq}.

8.1 CONSTRUCTION NOISE LEVELS

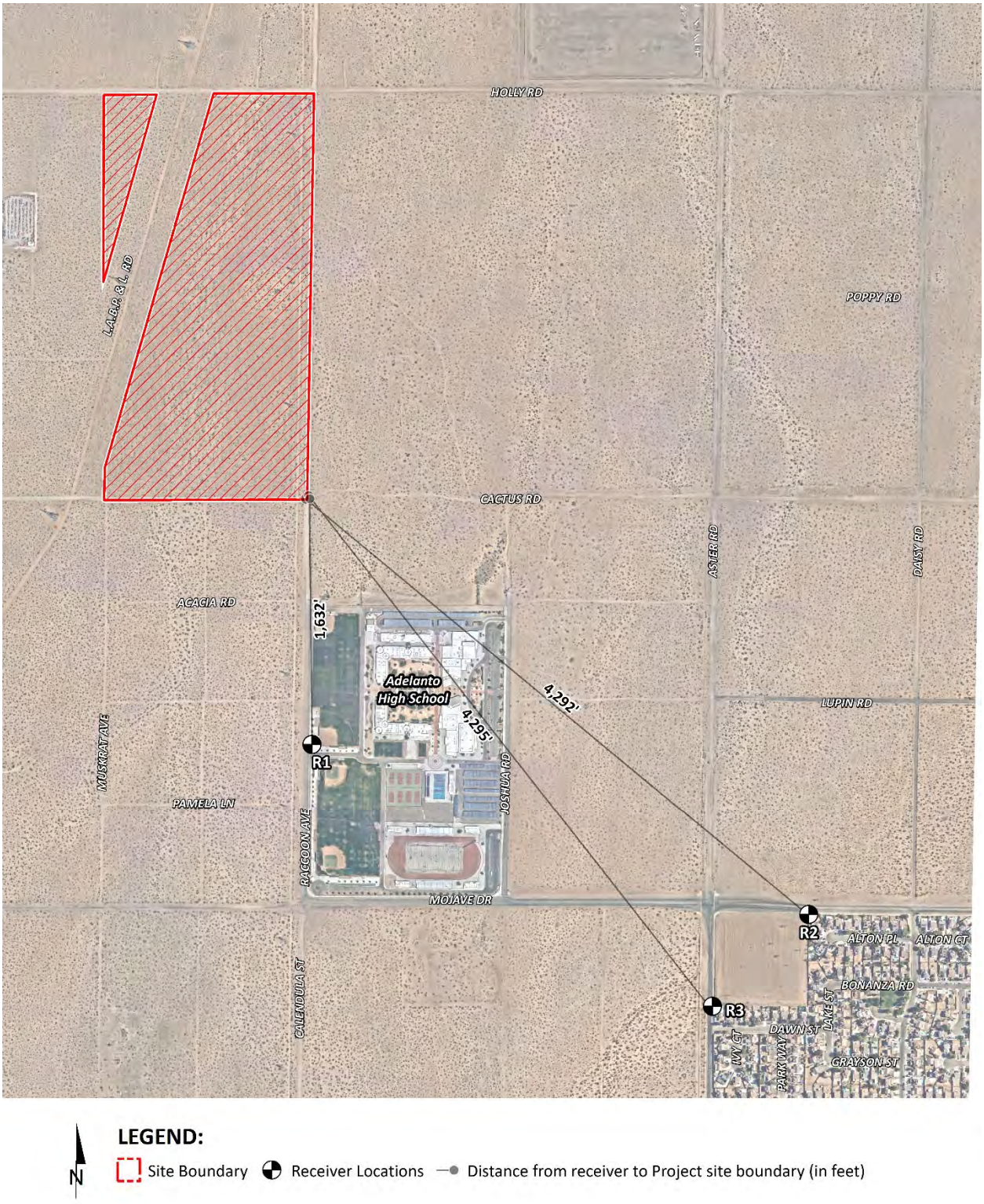
Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment are expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

8.2 TYPICAL CONSTRUCTION REFERENCE NOISE LEVELS

To describe peak construction noise activities, this construction noise analysis was prepared using reference noise level measurements published in the *FHWA Road Construction Nosie Model* (RCNM) (20). The RCNM database provides a conservative source of reference construction noise levels. Table 8-1 provides a summary of the FHWA construction reference noise level measurements expressed in hourly average dBA L_{eq} using the estimated FHWA RCNM usage factors to describe the typical construction activities for each stage of Project construction (20).

EXHIBIT 8-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS



8.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 8-1 presents the combined noise levels for the loudest construction equipment, assuming all equipment operates at the same time. As shown on Table 8-2, the construction noise levels are expected to range from 31.2 to 50.2 dBA L_{eq} at the nearby receiver locations. Appendix 8.1 includes the detailed CadnaA construction noise model inputs.

TABLE 8-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Composite Reference Noise Level (dBA L_{eq})	Reference Power Level (dBA L_w)
Site Preparation	Dozer	78.0	83.4	115.1
	Front End Loader	75.0		
	Grader	81.0		
Grading	Excavator	77.0	84.0	115.6
	Tractor	80.0		
	Scraper	80.0		
Building Construction	Crane	73.0	77.4	109.1
	Backhoe	74.0		
	Generator (<25kVA)	70.0		
Paving	Paver	74.0	77.8	109.5
	Dump Truck	72.0		
	Roller	73.0		
Architectural Coating	Man Lift	68.0	76.2	107.8
	Compressor (air)	74.0		
	Generator (<25kVA)	70.0		

[1] FHWA Road Construction Noise Model.

TABLE 8-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	49.7	50.2	43.6	44.1	42.4	50.2
R2	38.6	39.1	32.5	33.0	31.3	39.1
R3	38.5	39.0	32.4	32.9	31.2	39.0

[1] Noise receiver locations are shown on Exhibit 8-A.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 8.1.

8.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project would generate potentially significant short-term noise levels at the nearest receiver locations, Municipal Code Section 17.90.020[d][2] requires that construction equipment shall not generate noise exceeding 65 dBA L_{eq}. The construction noise analysis shows that the nearest receiver locations will not exceed the reasonable daytime 65 dBA L_{eq} significance threshold during Project construction activities as shown on Table 8-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 8-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	50.2	65	No
R2	39.1	65	No
R3	39.0	65	No

[1] Noise receiver locations are shown on Exhibit 8-A.
[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 8-2.
[3] City of Adelanto Municipal Code Section 17.90.020[d][2] (Appendix 3.1)
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

8.5 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 8-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 8-4: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076

Large bulldozer	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 9-5 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 1,632 feet to 4,295 feet from Project construction activities (at the Project site boundary), construction vibration levels at this distance are estimated to be below 0.01 PPV (in/sec) and will be below the City of Adelanto 0.20 in/sec PPV threshold for vibration at all receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during the construction activities at the Project site.

Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter.

TABLE 8-5: PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]						Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	1,632'	0.00	0.00	0.00	0.00	0.00	0.00	0.20	No
R2	4,292'	0.00	0.00	0.00	0.00	0.00	0.00	0.20	No
R3	4,295'	0.00	0.00	0.00	0.00	0.00	0.00	0.20	No

[1] Receiver locations are shown on Exhibit 8-A.
[2] Distance from receiver location to Project construction boundary (Project site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment (Table 8-4).
[4] City of Adelanto Municipal Code Section 17.90.030 (Appendix 3.1)
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

9 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2019.
2. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
4. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
5. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
6. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
7. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
8. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
9. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
10. **California Department of Transportation.** *Transportation and Construciton Vibration Guidance Manual.* 2020.
11. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual, FTA-VA-90-1003-06.* May 2006.
12. **Office of Planning and Research.** *State of California General Plan Guidelines.* 2017.
13. **City of Adelanto.** *General Plan Noise Element.* 1993.
14. —. *Municipal Code, Chapter 17.90 Performance Standards, Sections 17.90.020 Noise & 17.90.030 Vibration.*
15. **County of San Bernardino.** *Southern California Logistics Airport Comprehensive Land Use Plan.* September 2008.
16. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.
17. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
18. **California Department of Transportation.** *Technical Noise Supplement.* November 2009.
19. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
20. **U.S. Department of Transportation, Federal Highway Administration.** *Road Construction Noise Model, version 1.0.* 2006.

10 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Racoon Avenue Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (619) 778-1971.

William Maddux
Senior Associate
URBAN CROSSROADS, INC.
(619) 788-1971
bmaddux@urbanxroads.com

EDUCATION

Bachelor of Science in Urban and Regional Planning
California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
INCE – Institute of Noise Control Engineers

PROFESSIONAL CERTIFICATIONS

Approved Acoustical Consultant • County of San Diego
FHWA Traffic Noise Model of Training • November 2004
CadnaA Basic and Advanced Training Certificate • October 2008.

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APPENDIX 3.1:

CITY OF ADELANTO MUNICIPAL CODE

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17.90.020 Noise

(a) Noise Measurement

Noise shall be measured with a sound level meter which meets the standards of the American National Standards Institute (ANSI) Section SI4-1979, Type 1 or Type 2. Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (reference pressure = 20 micronewtons per meter squared). The unit of measure shall be designated as dB(A). Code Enforcement shall be the noise control officer.

(b) Noise Standards

(1) The noise standards contained in Table VIII-2, "Land Use Compatibility Guidelines Related to Noise Exposure" in the Noise Element of the General Plan shall apply to land uses city-wide and shall be used to define acceptable and unacceptable noise levels.

(2) No person shall operate or cause to operate any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:

A. The noise standard plus three (3) dBA for that receiving land use specified in Table VIII-2 of the General Plan Noise Element for a cumulative period of more than thirty (30) minutes in any hour; or

B. The noise standard plus five (5) dBA for a cumulative period of more than five (5) minutes in any hour; or

C. The noise standard plus ten (10) dBA for a cumulative period of more than three (3) minutes in any hour; or

D. The noise standard plus fifteen (15) dBA for a cumulative period of more than one (1) minute in any hour; or

E. The noise standard plus twenty (20) dBA for any period of time.

(3) If the measured ambient level exceeds any of the first four (4) noise limit categories above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

(4) If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Section 17.90.020(b)(2)A. shall be reduced by five (5) dBA.

(c) Exempt Noises

The following activities shall be exempted from the provisions of this Chapter:

(1) All mechanical devices, apparatus or equipment used, and related to or connected with emergency machinery, vehicles or activities.

(2) The provisions of this regulation shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation projects, public works projects or essential public works services and facilities, including those utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.

(3) Normal activities associated with and conducted on the grounds of any elementary, intermediate, secondary school or college.

(4) Outdoor gatherings, public dances and shows, provided said events are conducted pursuant to a permit as required by this Zoning Code.

(5) Activities conducted in public parks and public playgrounds, provided said events are conducted pursuant to a permit as required by this Zoning Code.

(6) Any activity to the extent regulation thereof has been preempted by State or Federal law.

(7) Traffic on any roadway or railroad right-of-way.

(8) Construction activity on private properties that are determined by the Building Official to be essential to the completion of a project, and are in compliance with Section 17.90.020(d)(1) of this Chapter.

(d) Construction Practices

To reduce potential noise and air quality nuisances, the following items shall be listed as "General Notes" on the construction drawings:

(1) Construction activity and equipment maintenance is limited to the hours between 7:00 a.m. to dusk on weekdays. Construction may not occur on weekends or State holidays, without prior consent of the Building Official. Non-noise generating activities (e.g. interior painting) are not subject to these restrictions. City and State construction projects, such as road re-building or resurfacing, and any construction activity that is in response to an emergency, shall be exempt from this requirement.

(2) Stationary construction equipment that generates noise in excess of sixty-five (65) dBA at the project boundaries must be acoustically shielded and located at least one hundred feet (100') from occupied residences. The equipment area with appropriate acoustic shielding shall be designated on building and grading plans. Equipment and shielding shall remain in the designated location throughout construction activities.

(3) Construction routes are limited to City of Adelanto designated truck routes.

(4) Water trucks or sprinkler systems shall be used during clearing, grading, earth moving, excavation, or transportation of cut or fill materials to prevent dust from leaving the site and to create a crust after each day's activities cease. At a minimum, this would include wetting down such areas in the later morning and after work is completed for the day and whenever wind exceeds fifteen (15) miles per hour.

(5) A person or persons shall be designated to monitor the dust control program and to order increased watering as necessary to prevent transport of dust off-site. The name and telephone number of such person(s) shall be provided to the City.

(6) All grading equipment shall be kept in good working order per factory specifications.

[Ord. No. 474, Section 5, 5/28/08.]

17.90.030 Vibration

(a) Vibration Standard

No ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the subject property line, nor will any vibration be permitted which produces a particle velocity greater than or equal to two-tenths of an inch (0.2") per second measured at or beyond the lot line.

(b) Vibration Measurement

Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity, or acceleration. Readings are to be made

at points of maximum vibration along any lot line next to a lot within a residential, commercial, or industrial land use district.

(c) Exempt Vibrations

Except as provided in the Municipal Code, the following sources of vibration are not regulated by this Zoning Code:

(1) Motor vehicles subject to regulation under the California Vehicle Code.

[Ord. No. 474, Section 5, 5/28/08.]

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APPENDIX 5.1:

STUDY AREA PHOTOS

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14894_L1_I 1.North
34, 31' 35.100000"117, 26' 5.080000"



14894_L1_I 2.South
34, 31' 35.050000"117, 26' 5.080000"



14894_L1_I 3.East
34, 31' 35.030000"117, 26' 5.080000"



14894_L1_I 4.West
34, 31' 35.000000"117, 26' 5.140000"



14894_L2_G 1.North
34, 31' 51.290000"117, 26' 36.950000"



14894_L2_G 2.South
34, 31' 51.290000"117, 26' 36.950000"



14894_L2_G 3.East
34, 31' 51.310000"117, 26' 36.730000"



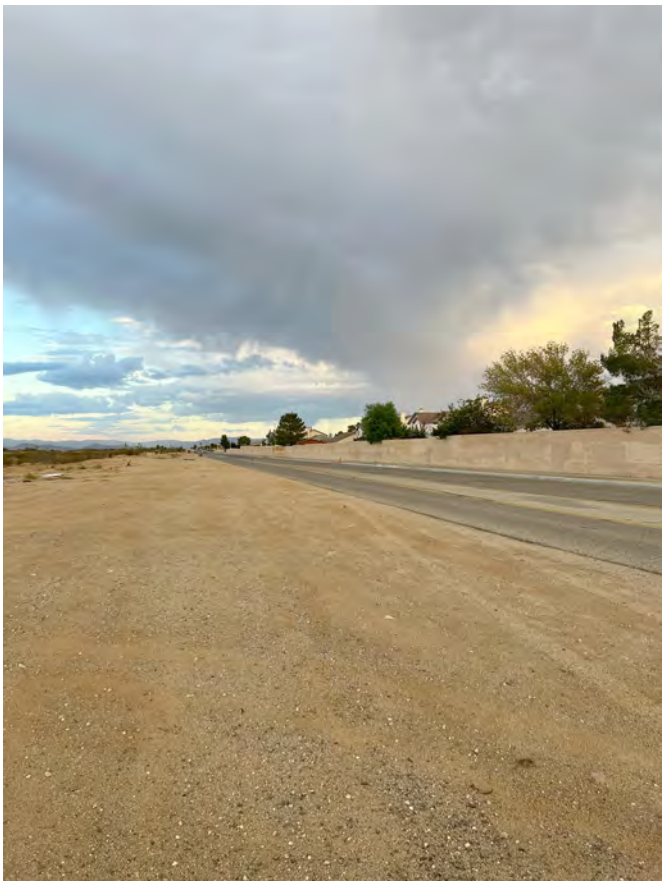
14894_L2_G 4.West
34, 31' 51.290000"117, 26' 36.750000"



14894_L3_H 1.North
34, 31' 42.760000"117, 25' 56.430000"



14894_L3_H 2.South
34, 31' 42.760000"117, 25' 56.430000"



14894_L3_H 3.East
34, 31' 42.760000"117, 25' 56.410000"



14894_L3_H 4.West
34, 31' 42.760000"117, 25' 56.430000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

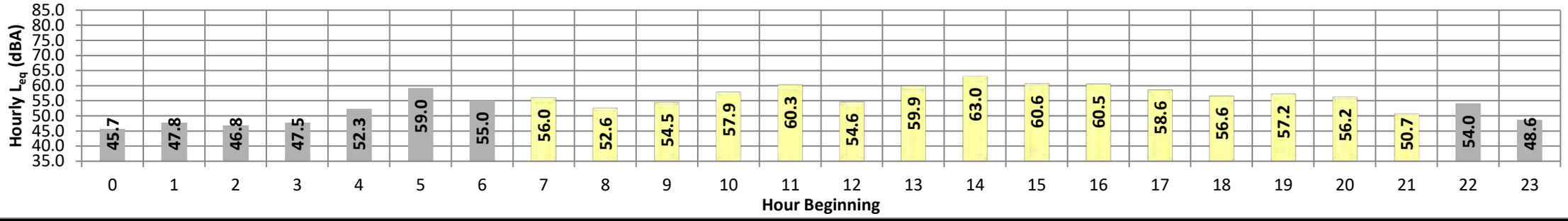
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24-Hour Noise Level Measurement Summary

Date: Wednesday, October 12, 2022 *Location:* L1 - Located near the Adelanto High School at 15620 Joshua *Meter:* Piccolo II *JN:* 14894

Project: Copart Adelanto *Source:* Road. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	45.7	56.0	37.0	55.6	55.1	53.1	51.1	44.0	40.2	37.5	37.3	37.1	45.7	10.0	55.7
	1	47.8	58.5	37.8	58.1	57.5	55.5	53.3	45.5	41.8	38.4	38.2	37.9	47.8	10.0	57.8
	2	46.8	57.3	37.3	57.0	56.4	54.1	52.6	44.9	41.3	37.9	37.6	37.4	46.8	10.0	56.8
	3	47.5	58.8	36.1	58.4	57.7	55.1	53.3	44.8	40.0	36.6	36.4	36.2	47.5	10.0	57.5
	4	52.3	63.2	38.6	62.9	62.3	60.1	58.1	50.1	44.4	39.7	39.1	38.7	52.3	10.0	62.3
	5	59.0	71.1	41.0	70.8	70.0	67.1	64.4	56.2	49.3	42.2	41.7	41.2	59.0	10.0	69.0
	6	55.0	65.5	41.5	65.1	64.6	62.5	60.7	53.9	48.0	42.8	42.3	41.7	55.0	10.0	65.0
Day	7	56.0	66.6	44.5	66.1	65.4	63.2	61.3	55.1	50.5	45.9	45.3	44.7	56.0	0.0	56.0
	8	52.6	63.4	40.2	63.2	62.6	60.0	58.2	50.9	46.8	41.7	41.0	40.4	52.6	0.0	52.6
	9	54.5	66.1	38.6	65.7	65.0	62.2	59.6	52.4	46.6	40.3	39.7	38.7	54.5	0.0	54.5
	10	57.9	67.0	41.0	66.6	66.1	64.2	62.7	58.4	54.7	47.1	45.3	41.8	57.9	0.0	57.9
	11	60.3	71.0	38.7	70.5	70.2	69.3	67.6	54.5	46.8	40.4	39.5	38.8	60.3	0.0	60.3
	12	54.6	65.4	40.4	65.1	64.3	61.5	59.6	53.7	49.5	43.7	42.2	40.7	54.6	0.0	54.6
	13	59.9	69.1	46.3	68.6	68.0	66.3	65.0	59.9	56.2	50.2	48.7	46.9	59.9	0.0	59.9
	14	63.0	71.4	49.9	70.9	70.4	68.7	67.7	63.9	59.5	53.6	52.4	50.5	63.0	0.0	63.0
	15	60.6	70.3	47.9	69.7	69.0	66.7	65.4	61.0	57.0	50.8	49.5	48.2	60.6	0.0	60.6
	16	60.5	72.2	41.8	71.8	71.1	68.0	65.7	58.9	51.9	44.2	43.4	42.0	60.5	0.0	60.5
	17	58.6	69.6	41.8	69.2	68.6	66.5	64.3	56.7	50.4	43.7	42.9	42.1	58.6	0.0	58.6
	18	56.6	67.6	41.5	67.3	66.6	64.2	62.1	54.9	49.4	43.2	42.5	41.7	56.6	0.0	56.6
	19	57.2	66.5	43.5	66.2	65.6	63.8	62.4	57.7	52.2	45.0	44.4	43.7	57.2	5.0	62.2
	20	56.2	68.2	40.1	67.8	67.0	64.1	61.7	53.4	46.7	41.2	40.7	40.3	56.2	5.0	61.2
	21	50.7	63.5	36.9	63.0	62.2	58.6	55.8	45.9	40.5	37.6	37.3	37.1	50.7	5.0	55.7
Night	22	54.0	65.4	39.2	65.1	64.5	62.0	59.4	51.0	44.6	40.0	39.7	39.3	54.0	10.0	64.0
	23	48.6	59.6	38.8	59.2	58.6	55.7	53.6	47.9	42.5	39.6	39.2	39.0	48.6	10.0	58.6

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	50.7	63.4	36.9	63.0	62.2	58.6	55.8	45.9	40.5	37.6	37.3	37.1
	Max	63.0	72.2	49.9	71.8	71.1	69.3	67.7	63.9	59.5	53.6	52.4	50.5
Energy Average		58.4	Average:		67.5	66.8	64.5	62.6	55.8	50.6	44.6	43.6	42.5
Night	Min	45.7	56.0	36.1	55.6	55.1	53.1	51.1	44.0	40.0	36.6	36.4	36.2
	Max	59.0	71.1	41.5	70.8	70.0	67.1	64.4	56.2	49.3	42.8	42.3	41.7
Energy Average		53.0	Average:		61.4	60.8	58.4	56.3	48.7	43.6	39.4	39.1	38.7

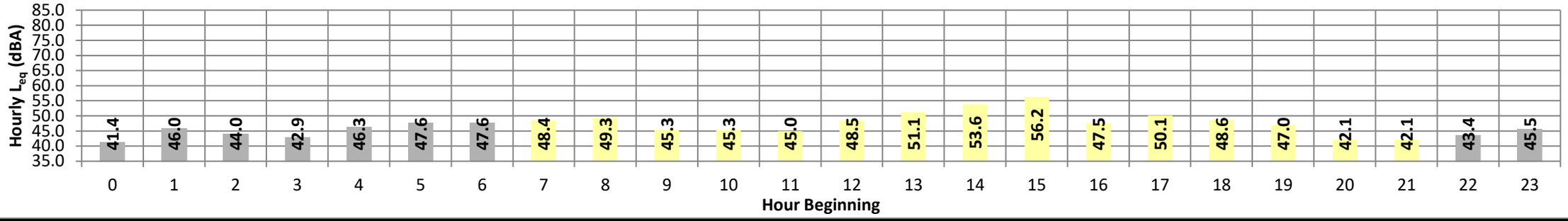
24-Hour CNEL	Leq (dBA) Daytime (7am-10pm)	Leq (dBA) Nighttime (10pm-7am)
61.1	**58.4**	**53.0**

24-Hour Noise Level Measurement Summary

Date: Wednesday, October 12, 2022 *Location:* L2 - Located near the existing single-family residence at 10608 *Meter:* Piccolo II *JN:* 14894

Project: Copart Adelanto *Source:* Anton Place. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	41.4	43.5	39.9	43.3	43.1	42.7	42.5	41.8	41.3	40.4	40.2	40.0	41.4	10.0	51.4
	1	46.0	53.0	41.1	52.7	52.3	51.1	49.9	46.4	43.9	41.8	41.5	41.2	46.0	10.0	56.0
	2	44.0	50.7	39.8	50.5	50.3	49.2	47.6	43.9	42.4	40.4	40.1	39.9	44.0	10.0	54.0
	3	42.9	50.6	39.6	50.1	49.5	47.9	45.7	42.7	41.3	40.1	39.9	39.7	42.9	10.0	52.9
	4	46.3	54.4	41.3	54.1	53.8	52.3	50.9	46.2	43.4	41.9	41.6	41.4	46.3	10.0	56.3
	5	47.6	55.6	41.5	55.3	55.0	53.7	52.4	48.1	43.9	42.2	41.9	41.7	47.6	10.0	57.6
	6	47.6	56.2	42.6	55.9	55.6	54.1	52.0	46.8	44.5	43.2	43.0	42.8	47.6	10.0	57.6
Day	7	48.4	56.5	44.1	55.9	55.3	53.6	52.1	48.1	46.5	44.8	44.5	44.2	48.4	0.0	48.4
	8	49.3	57.4	43.2	57.2	56.8	56.3	54.8	47.5	46.0	44.1	43.7	43.3	49.3	0.0	49.3
	9	45.3	52.3	39.9	51.9	51.5	50.3	49.0	45.8	43.9	40.9	40.6	40.1	45.3	0.0	45.3
	10	45.3	51.5	41.1	51.2	50.8	49.6	48.5	45.6	44.2	42.0	41.6	41.3	45.3	0.0	45.3
	11	45.0	54.1	37.7	53.8	53.5	51.9	50.1	44.1	41.1	38.7	38.2	37.9	45.0	0.0	45.0
	12	48.5	57.1	40.1	56.8	56.2	54.5	53.2	48.7	45.5	41.6	41.0	40.3	48.5	0.0	48.5
	13	51.1	60.3	40.3	59.6	58.9	57.3	56.0	51.7	47.8	42.5	41.5	40.6	51.1	0.0	51.1
	14	53.6	66.8	42.5	64.9	63.7	59.6	57.1	52.7	49.2	44.2	43.5	42.8	53.6	0.0	53.6
	15	56.2	64.5	47.3	63.8	63.3	62.1	61.1	56.6	53.4	49.2	48.4	47.6	56.2	0.0	56.2
	16	47.5	58.0	39.2	57.5	57.1	55.1	52.9	44.9	42.1	40.0	39.7	39.3	47.5	0.0	47.5
	17	50.1	59.7	40.7	59.4	59.0	57.4	56.0	48.7	44.5	41.8	41.4	40.9	50.1	0.0	50.1
	18	48.6	59.1	40.8	58.8	58.2	56.0	53.4	47.1	43.4	41.4	41.2	40.9	48.6	0.0	48.6
	19	47.0	52.5	42.8	51.9	51.5	50.5	49.7	47.8	46.3	43.9	43.4	42.9	47.0	5.0	52.0
	20	42.1	45.1	40.3	44.8	44.6	44.1	43.8	42.6	41.7	40.8	40.6	40.4	42.1	5.0	47.1
	21	42.1	45.8	40.1	45.5	45.3	44.5	43.9	42.4	41.6	40.7	40.5	40.3	42.1	5.0	47.1
Night	22	43.4	48.1	41.6	47.8	47.5	46.4	45.5	43.3	42.8	42.1	41.9	41.7	43.4	10.0	53.4
	23	45.5	51.8	42.0	51.5	51.0	49.8	48.5	45.8	44.4	42.7	42.4	42.1	45.5	10.0	55.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	42.1	45.1	37.7	44.8	44.6	44.1	43.8	42.4	41.1	38.7	38.2	37.9
	Max	56.2	66.8	47.3	64.9	63.7	62.1	61.1	56.6	53.4	49.2	48.4	47.6
Energy Average		49.7	Average:		55.5	55.0	53.5	52.1	47.6	45.1	42.4	42.0	41.5
Night	Min	41.4	43.5	39.6	43.3	43.1	42.7	42.5	41.8	41.3	40.1	39.9	39.7
	Max	47.6	56.2	42.6	55.9	55.6	54.1	52.4	48.1	44.5	43.2	43.0	42.8
Energy Average		45.4	Average:		51.2	50.9	49.7	48.3	45.0	43.1	41.6	41.4	41.2

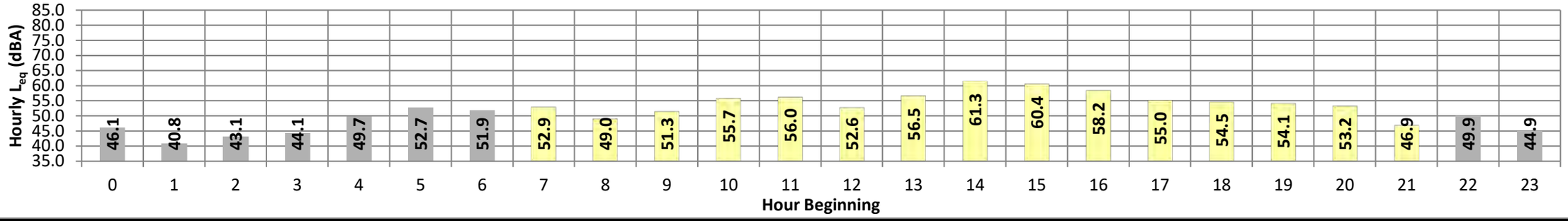
24-Hour CNEL	Leq (dBA) Daytime (7am-10pm)	Leq (dBA) Nighttime (10pm-7am)
52.9	**49.7**	**45.4**

24-Hour Noise Level Measurement Summary

Date: Wednesday, October 12, 2022 *Location:* L3 - Located southeast of the Project site near the existing *Meter:* Piccolo II *JN:* 14894

Project: Copart Adelanto *Source:* single-family residence at 10512 Dawn St. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	46.1	55.5	36.8	55.2	55.0	53.8	52.1	44.2	39.9	37.5	37.2	36.9	46.1	10.0	56.1
	1	40.8	47.2	36.5	46.9	46.6	46.0	44.4	41.3	39.1	37.2	36.9	36.6	40.8	10.0	50.8
	2	43.1	52.7	35.4	52.4	52.0	50.8	48.7	41.2	39.1	36.1	35.8	35.5	43.1	10.0	53.1
	3	44.1	54.5	34.4	54.1	53.6	52.3	50.0	41.0	37.2	35.1	34.8	34.5	44.1	10.0	54.1
	4	49.7	59.5	38.0	59.2	59.0	57.7	55.9	47.9	42.3	39.1	38.6	38.1	49.7	10.0	59.7
	5	52.7	61.8	39.7	61.5	61.3	60.1	58.5	52.4	47.3	41.6	40.8	40.0	52.7	10.0	62.7
	6	51.9	62.1	40.9	61.8	61.5	59.4	57.2	50.6	45.9	42.0	41.6	41.1	51.9	10.0	61.9
Day	7	52.9	63.0	42.5	62.6	62.0	60.1	58.3	52.0	47.4	43.5	43.1	42.7	52.9	0.0	52.9
	8	49.0	58.3	39.1	58.0	57.7	56.6	54.6	48.3	43.3	40.0	39.7	39.3	49.0	0.0	49.0
	9	51.3	60.5	37.0	60.1	59.8	58.7	57.5	50.7	45.1	38.6	37.8	37.2	51.3	0.0	51.3
	10	55.7	68.6	36.1	68.1	67.3	63.8	60.9	50.1	43.0	37.4	36.9	36.3	55.7	0.0	55.7
	11	56.0	65.0	35.3	64.7	64.4	63.8	63.3	52.8	43.8	36.9	36.0	35.4	56.0	0.0	56.0
	12	52.6	61.0	41.6	60.7	60.4	59.0	57.6	52.8	49.3	44.5	43.3	42.1	52.6	0.0	52.6
	13	56.5	63.5	45.1	63.2	62.9	62.0	61.0	57.5	54.2	48.6	47.3	45.6	56.5	0.0	56.5
	14	61.3	74.7	45.8	73.4	71.8	67.9	65.5	59.2	55.4	48.9	47.7	46.3	61.3	0.0	61.3
	15	60.4	71.2	44.4	70.7	70.0	67.9	66.4	58.5	52.8	46.6	45.4	44.6	60.4	0.0	60.4
	16	58.2	69.5	39.1	69.0	68.4	66.0	63.4	57.2	49.8	41.6	40.5	39.3	58.2	0.0	58.2
	17	55.0	63.9	39.5	63.6	63.3	61.9	60.5	55.8	49.8	41.6	40.7	39.8	55.0	0.0	55.0
	18	54.5	63.5	40.2	63.1	62.7	61.4	60.0	54.9	49.0	41.9	41.2	40.4	54.5	0.0	54.5
	19	54.1	62.8	43.6	62.4	62.1	60.7	59.4	54.0	49.9	45.3	44.5	43.8	54.1	5.0	59.1
	20	53.2	62.6	40.2	62.3	61.9	60.6	59.1	52.9	46.8	41.5	40.9	40.4	53.2	5.0	58.2
	21	46.9	58.0	35.9	57.6	57.3	55.4	52.8	43.2	39.4	36.7	36.3	36.0	46.9	5.0	51.9
Night	22	49.9	60.5	39.2	60.1	59.6	57.8	55.8	47.6	42.6	40.2	39.7	39.3	49.9	10.0	59.9
	23	44.9	53.5	38.8	53.2	52.8	51.4	49.8	44.3	41.3	39.6	39.3	38.9	44.9	10.0	54.9

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	46.9	58.0	35.3	57.6	57.3	55.4	52.8	43.2	39.4	36.7	36.0	35.4
	Max	61.3	74.7	45.8	73.4	71.8	67.9	66.4	59.2	55.4	48.9	47.7	46.3
Energy Average		56.0	Average:		64.0	63.5	61.7	60.0	53.3	47.9	42.2	41.4	40.6
Night	Min	40.8	47.2	34.4	46.9	46.6	46.0	44.4	41.0	37.2	35.1	34.8	34.5
	Max	52.7	62.1	40.9	61.8	61.5	60.1	58.5	52.4	47.3	42.0	41.6	41.1
Energy Average		48.7	Average:		56.0	55.7	54.4	52.5	45.6	41.6	38.7	38.3	37.9

24-Hour CNEL	Leq (dBA) Daytime (7am-10pm)	Leq (dBA) Nighttime (10pm-7am)
57.6	**56.0**	**48.7**

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APPENDIX 7.1:
CADNAA OPERATIONAL NOISE CALCULATIONS

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15178 - Racoon Avenue

CadnaA Noise Prediction Model: 15178-02_Operation.cna
Date: 24.04.23
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Reference Time Day (min)	**960.00**
Reference Time Night (min)	**480.00**
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	40.8	40.8	47.4	0.0	0.0	0.0		x	Total	5.00	a	6202184.21	2503803.00	5.00
R2		R2	29.1	29.1	35.8	0.0	0.0	0.0		x	Total	5.00	a	6205411.90	2501807.95	5.00
R3		R3	29.0	29.0	35.6	0.0	0.0	0.0		x	Total	5.00	a	6204784.75	2501210.84	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
GATE01		GATE01	93.3	93.3	93.3	Lw	93.3					6.00	r	6201795.36	2507130.65	6.00
GATE02		GATE02	93.3	93.3	93.3	Lw	93.3					6.00	r	6200907.98	2507139.35	6.00
RECEIVING01		RECEIVING01	93.4	93.4	93.4	Lw	93.4					10.00	r	6200921.03	2506930.56	10.00
RECEIVING02		RECEIVING02	93.4	93.4	93.4	Lw	93.4					10.00	r	6200990.63	2506739.16	10.00
RECEIVING03		RECEIVING03	93.4	93.4	93.4	Lw	93.4					10.00	r	6200929.73	2506547.77	10.00
RECEIVING04		RECEIVING04	93.4	93.4	93.4	Lw	93.4					10.00	r	6201482.17	2506682.61	10.00
RECEIVING05		RECEIVING05	93.4	93.4	93.4	Lw	93.4					10.00	r	6201651.82	2506447.72	10.00
RECEIVING06		RECEIVING06	93.4	93.4	93.4	Lw	93.4					10.00	r	6201943.26	2506526.02	10.00
RECEIVING07		RECEIVING07	93.4	93.4	93.4	Lw	93.4					10.00	r	6201821.46	2506273.72	10.00
RECEIVING08		RECEIVING08	93.4	93.4	93.4	Lw	93.4					10.00	r	6201434.32	2506295.47	10.00
RECEIVING09		RECEIVING09	93.4	93.4	93.4	Lw	93.4					10.00	r	6201595.27	2506082.33	10.00
RECEIVING10		RECEIVING10	93.4	93.4	93.4	Lw	93.4					10.00	r	6201316.87	2505808.28	10.00
RECEIVING11		RECEIVING11	93.4	93.4	93.4	Lw	93.4					10.00	r	6201743.16	2505830.03	10.00
RECEIVING12		RECEIVING12	93.4	93.4	93.4	Lw	93.4					10.00	r	6201912.81	2506056.23	10.00
RECEIVING13		RECEIVING13	93.4	93.4	93.4	Lw	93.4					10.00	r	6201508.27	2505582.09	10.00

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
RECEIVING14		RECEIVING14	93.4	93.4	93.4	Lw	93.4					10.00	r	6201168.98	2505403.74	10.00
RECEIVING15		RECEIVING15	93.4	93.4	93.4	Lw	93.4					10.00	r	6201708.36	2505408.09	10.00
RECEIVING16		RECEIVING16	93.4	93.4	93.4	Lw	93.4					10.00	r	6201847.56	2505638.63	10.00
RECEIVING17		RECEIVING17	93.4	93.4	93.4	Lw	93.4					10.00	r	6201429.97	2505242.79	10.00
RECEIVING18		RECEIVING18	93.4	93.4	93.4	Lw	93.4					10.00	r	6201112.43	2505073.15	10.00
RECEIVING19		RECEIVING19	93.4	93.4	93.4	Lw	93.4					10.00	r	6201438.67	2504877.40	10.00
RECEIVING20		RECEIVING20	93.4	93.4	93.4	Lw	93.4					10.00	r	6201068.93	2504742.55	10.00
RECEIVING21		RECEIVING21	93.4	93.4	93.4	Lw	93.4					10.00	r	6201878.01	2504686.00	10.00
RECEIVING22		RECEIVING22	93.4	93.4	93.4	Lw	93.4					10.00	r	6201734.46	2505142.74	10.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)

Name	ID	Height				Coordinates				
		Begin		End		x	y	z	Ground	
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)	

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
STORAGE01		STORAGE01	100.2	100.2	100.2	58.3	58.3	58.3	Lw	100.2					6	r
STORAGE02		STORAGE02	100.2	100.2	100.2	47.4	47.4	47.4	Lw	100.2					6	r

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
STORAGE01	STORAGE01	6.00	r			6200853.77	2507080.34	6.00	0.00
						6200916.27	2507077.73	6.00	0.00
						6200924.08	2507017.84	6.00	0.00
						6201129.78	2507019.72	6.00	0.00
						6200818.59	2505976.18	6.00	0.00
						6200820.94	2506799.12	6.00	0.00
						6200821.73	2507075.15	6.00	0.00
STORAGE02	STORAGE02	6.00	r			6201426.55	2506779.14	6.00	0.00
						6201786.06	2506684.50	6.00	0.00
						6201767.83	2506603.78	6.00	0.00
						6202085.54	2506606.38	6.00	0.00
						6202036.06	2504549.09	6.00	0.00
						6200824.06	2504546.90	6.00	0.00
						6200829.22	2504722.87	6.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates				
							Begin	x	y	z	Ground	
							(ft)	(ft)	(ft)	(ft)	(ft)	

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

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APPENDIX 8.1:

CADNAA CONSTRUCTION NOISE CALCULATIONS

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15178 - Racoon Avenue

CadnaA Noise Prediction Model: 15178-02_Construction.cna
Date: 06.04.23
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Reference Time Day (min)	**960.00**
Reference Time Night (min)	**480.00**
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	50.2	-49.8	47.2	0.0	0.0	0.0		x	Total	5.00	a	6202184.21	2503803.00	5.00
R2		R2	39.1	-60.9	36.1	0.0	0.0	0.0		x	Total	5.00	a	6205411.90	2501807.95	5.00
R3		R3	39.0	-61.0	36.0	0.0	0.0	0.0		x	Total	5.00	a	6204784.75	2501210.84	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
CONSTRUCTIONAREA02		CONSTRUCTIONAREA02	115.6	15.6	15.6	72.7	-27.3	-27.3	PWL-Pt	115.6					8	a
CONSTRUCTIONAREA01		CONSTRUCTIONAREA01	115.6	15.6	15.6	61.6	-38.4	-38.4	PWL-Pt	115.6					8	a

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
CONSTRUCTIONAREA02	CONSTRUCTIONAREA02	8.00	a			6200821.92	2507142.24	8.00	0.00
						6201165.67	2507145.71	8.00	0.00
						6200818.45	2505926.96	8.00	0.00
CONSTRUCTIONAREA01	CONSTRUCTIONAREA01	8.00	a			6200829.22	2504722.87	8.00	0.00
						6201534.70	2507151.45	8.00	0.00
						6202188.99	2507153.21	8.00	0.00
						6202143.81	2504511.93	8.00	0.00
						6200822.90	2504507.16	8.00	0.00

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APPENDIX J
Holly Road and Racoon Avenue Trip Generation Analysis, City of Adelanto

May 1, 2023

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

Ms. Sabrina Snowball
CASC ENGINEERING & CONSULTING
1470 E. Cooley Drive
Colton, CA 92324

SUBJECT: Holly Road and Racoon Avenue Trip Generation Analysis, City of Adelanto

Dear Ms. Snowball,

*TJW Engineering, Inc. (*TJW*)* is pleased to submit this Trip Generation Analysis for the proposed project located at the corner of Holly Road and Racoon Avenue in the City of Adelanto. The proposed project includes an industrial use parking lot for totaled vehicle storage (i.e., cars, trailers, trucks, rv's, etc.) across approximately 66 acres. A site plan is attached for reference.

Proposed Project

The proposed site is located at the corner of Holly Road and Racoon Avenue in the City of Adelanto. The project will construct an industrial use parking lot for totaled vehicle storage (i.e., cars, trailers, trucks, rv's, etc.) on approximately 66 acres.

The project proposes to utilize the totaled vehicle storage area on an "as needed" basis to assist with incoming deliveries of totaled vehicles. The project will be available Monday through Friday between the house of 8:00 AM and 5:00 PM. The project estimates approximately 8 to 10 truck trips per day.

Trip Generation Analysis

Projected trip generation for the proposed project was developed based on the County of San Bernardino Transportation Impact Study Guidelines (July 2019). The guidelines state land uses that generate less than 50 peak hour trips will not require a Traffic Impact Study (TIS) that includes LOS analysis.

The Institute of Transportation Engineers Trip Generation Manual (11th Edition) does not contain data for totaled vehicle storage. The following trip generation is based on the project's proposed operation of up to 10 trucks per day. The proposed project is projected to generate 4 total AM peak hour trips, 4 total PM peak hour trips, and 30 total daily trips.

Table 1 – Trip Generation

Proposed Land Use	Qty	Unit	Daily Trips (ADTs)		AM Peak Hour					PM Peak Hour				
			Rate	Trips	Rate	In:Out Split	Trips			Rate	In:Out Split	Trips		
							In	Out	Total			In	Out	Total
Totaled Vehicle Storage	66	AC		30		50:50	2	2	4		50:50	2	2	4
Total				**30**			**2**	**2**	**4**			**2**	**2**	**4**

1: AC=Acres
2: Daily trips are based on 10 truck trips per day and assumes a 3.0 Passenger Car Equivalents (PCE) factor per truck
3: AM/PM peak volumes assumed to account for 10% of ADT

Vehicle Miles Traveled (VMT) Screening

Senate Bill (SB) 743 was adopted in 2013 requiring the Governor's Office of Planning and Research (OPR) to identify new metrics for identifying and mitigating transportation impacts within the California Environmental Quality Act (CEQA). For land use projects, OPR has identified Vehicle Miles Traveled (VMT) as the new metric for transportation analysis under CEQA. The regulatory changes to the CEQA guidelines that implement SB 743 were approved on December 28th, 2018 with an implementation date of July 1st, 2020 as the new metric.

The County of San Bernardino updated their Transportation Impact Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment in July 2019. The document outlines guidelines for CEQA analysis including screening criteria and requirements for VMT assessment of land use projects. The VMT guidelines provide several screening criteria for projects including Transit Priority Area (TPA) Screening, Low VMT Area Screening, and Project Type Screening.

The County of San Bernardino Transportation Impact Study Guidelines indicates projects generating less than 110 daily vehicle trips are not required to complete a VMT assessment. The proposed project will generate less than 110 daily vehicle trips. Therefore, the proposed project can be assumed to not have a significant VMT impact.

Summary

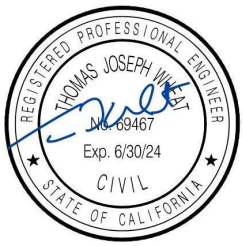
This memorandum provides an overview of the trip generation analysis for the proposed project. Based on the County of San Bernardino Transportation Impact Study Guidelines (July 2019), the proposed project generates less than 50 peak hour trips and does not require a TIA that includes LOS analysis. In addition, the County guidelines outline projects generating less than 110 daily vehicle trips may be presumed to have a less than significant impact on VMT and be screened from VMT analysis. Consistent with the County guidelines, the proposed project does not require additional traffic or VMT analysis.

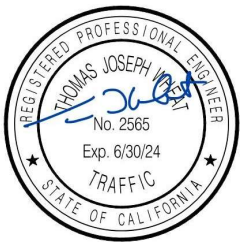
Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President

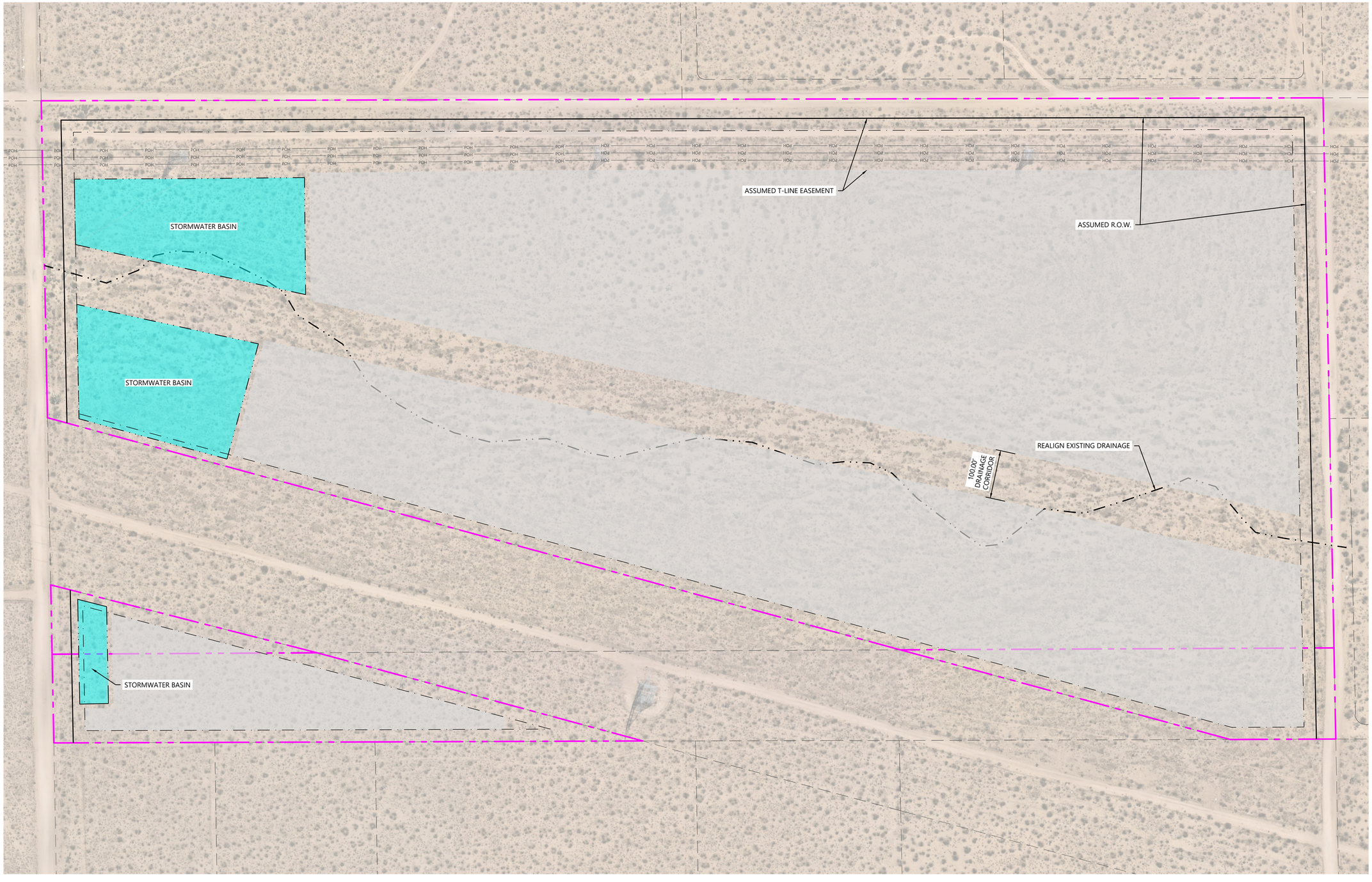
Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*





David Chew, PTP
Transportation Planner

© 2022 Westwood Professional Services, Inc.



NOT FOR CONSTRUCTION

N:\0035770.00\DWG\CONCEPTS & EXHIBITS\0035770SK01.DWG

ADELANTO, CA 66 AC

DESIGNED: .
CHECKED: .
DRAWN: .
HORIZONTAL SCALE: 100'
VERTICAL SCALE: 20' OR 10'

INITIAL ISSUE: 03/08/22
REVISIONS:
1 . .
2 . .
3 . .
4 . .
5 . .

PREPARED FOR: Copart

. .
DATE: 03/08/22 LICENSE NO. .

ADELANTO, CA 66 AC
ADELANTO, CA

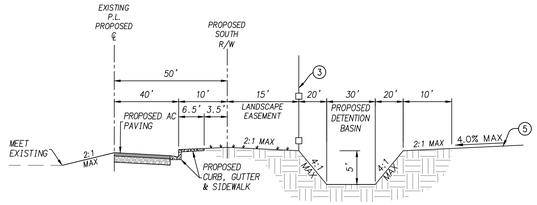
Westwood
Phone (320) 253-9495 3701 12th Street North, Suite 206
Fax (320) 358-2001 St. Cloud, MN 56303
Toll Free (800) 270-9495 westwoodps.com
Westwood Professional Services, Inc.

SITE CONCEPT PLAN

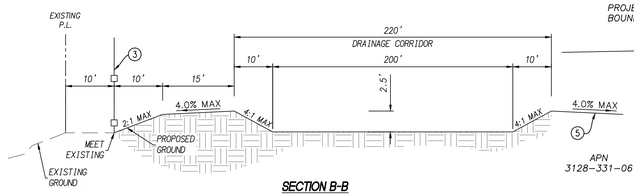
PROJECT NUMBER: 0035770.00

SHEET NUMBER: 1 OF 1
DATE: 03/08/22

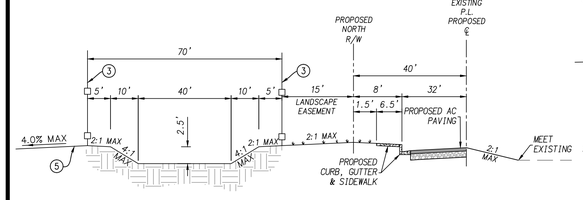
Appendix K
Conceptual Grading Plan Copart-66 Acre Project



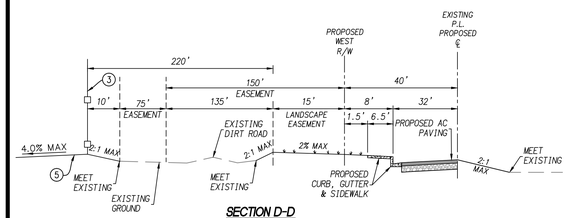
SECTION A-A
NTS



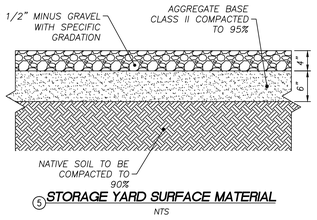
SECTION B-B
NTS



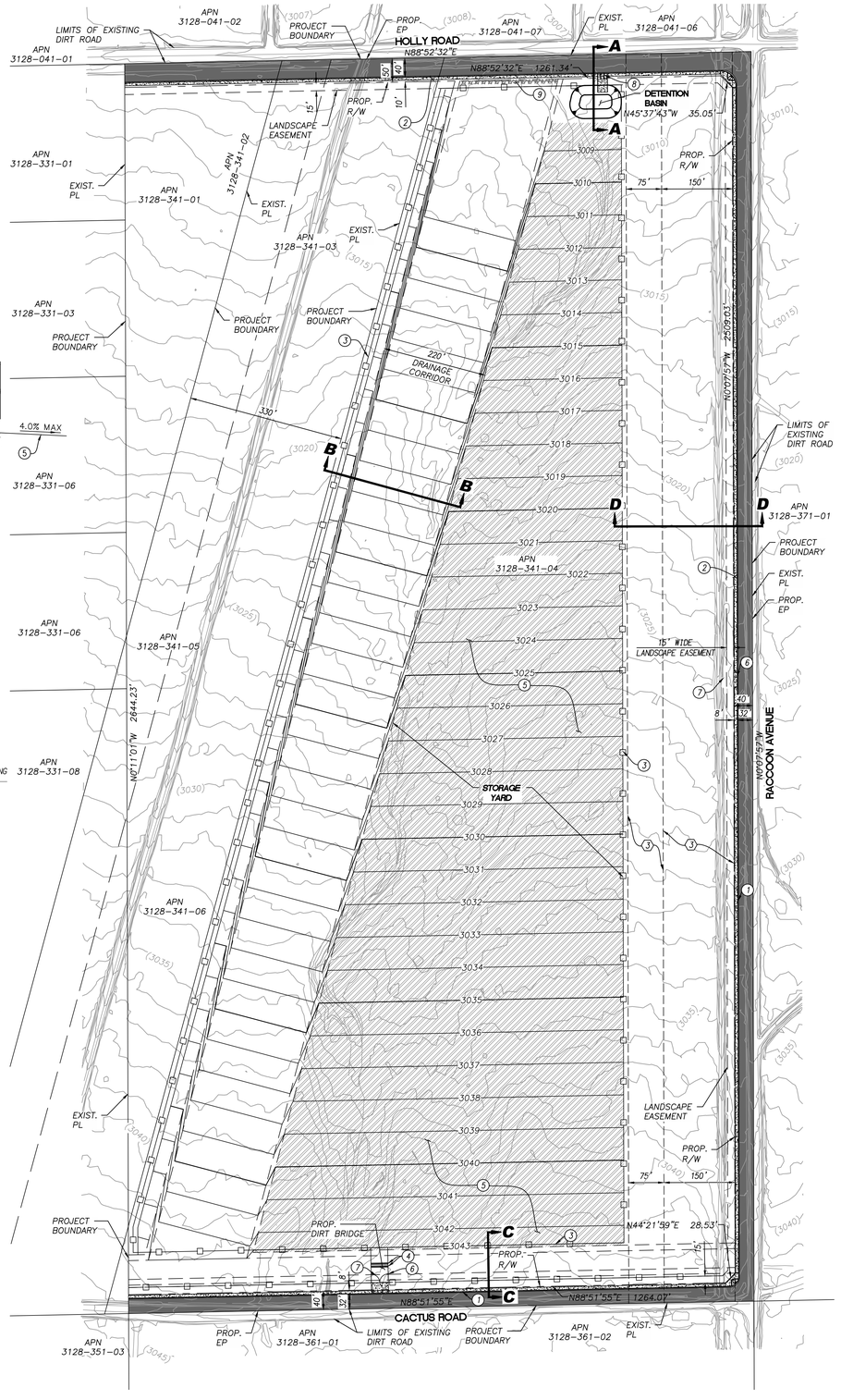
SECTION C-C
NTS



SECTION D-D
NTS



⑤ STORAGE YARD SURFACE MATERIAL
NTS



CONSTRUCTION NOTES

1. PROPOSED CURB AND GUTTER
2. PROPOSED SIDEWALK
3. PROPOSED 8' TALL METAL FENCE
4. PROPOSED 18" CULVERT STORM DRAIN
5. PROPOSED STORAGE YARD MATERIAL PER DETAIL HERON
6. PROPOSED COMMERCIAL DRIVEWAY
7. PROPOSED SECURITY GATE
8. INSTALL PARKWAY DRAINS
9. INSTALL RIP-RAP

LEGAL DESCRIPTION

PARCEL 1:
GOVERNMENT LOT 1 OF THE NORTHWEST 1/4 OF SECTION 7, TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND APPROVED BY THE SURVEYOR GENERAL, DATED MARCH 19, 1856.
EXCEPTING THEREFROM THAT PORTION GRANTED TO VICTOR G. SABO AND ELLA B. SABO, HUSBAND AND WIFE, IN DEED RECORDED FEBRUARY 15, 1966 IN BOOK 6571, PAGE 355 OF OFFICIAL RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.
ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF LOS ANGELES, A MUNICIPAL CORPORATION IN DEED RECORDED MAY 14, 1985 AS INSTRUMENT NO. 85-113429 OF OFFICIAL RECORDS.
PARCEL 2:
THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 7, BEING A PORTION OF GOVERNMENT LOT 1 OF SAID NORTHWEST 1/4, ALL IN TOWNSHIP 5 NORTH, RANGE 5 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND APPROVED BY THE SURVEYOR GENERAL, DATED MARCH 19, 1856.
EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF LOS ANGELES, A MUNICIPAL CORPORATION, IN DEED RECORDED JUNE 17, 1985 AS INSTRUMENT NO. 85-144097 OF OFFICIAL RECORDS.

EASEMENTS

1. RESERVATIONS CONTAINED IN THE PATENT IN FAVOR OF THE UNITED STATES OF AMERICA IN BOOK L PAGE 19, RECORDED MARCH 09, 1918 OF PATENTS
2. EASEMENT IN FAVOR OF BANK OF AMERICA NATIONAL TRUST AND SAVINGS ASSOCIATION FOR PUBLIC UTILITIES FILED IN BOOK 6571 PAGE 355, RECORDED FEBRUARY 15, 1965, OF OFFICIAL RECORDS

(3) EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA EDISON COMPANY FOR PUBLIC UTILITIES RECORDING NUMBER 90-388717, RECORDED SEPTEMBER 28, 1990, OF OFFICIAL RECORDS

UTILITY NOTIFICATION

SOUTHWEST GAS
13471 MARIPOSA ROAD
VICTORVILLE, CA 92392
PHONE: (760) 951-4044

SOUTHERN CALIFORNIA GAS COMPANY
1981 WEST LUGONIA AVENUE
REDLANDS, CA 92373
PHONE: (909) 335-7750

SOUTHERN CALIFORNIA EDISON
30553 RIMROCK ROAD
BARSTOW, CA 92311
PHONE: (760) 252-6402

FONTANA WATER COMPANY
15966 ARROW ROUTE
FONTANA, CA 92335
PHONE: (909) 822-2201

CITY OF ADELANTO (SEWER & WATER)
11600 AIR EXPY
ADELANTO, CA 92301
PHONE: (760) 246-2300

SOURCE OF SURVEY

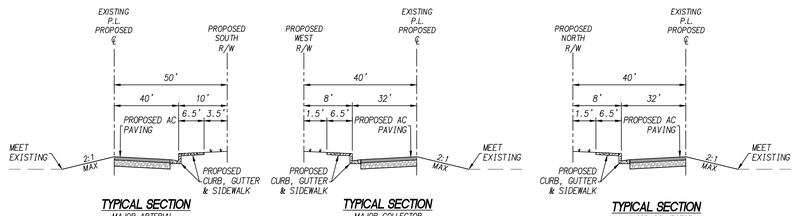
AERIAL TOPOGRAPHIC SURVEY
DATED AUGUST 2022
AS CONDUCTED BY
CASC ENGINEERING AND CONSULTING
1470 EAST COOLEY DRIVE
COLTON, CALIFORNIA 92324
PHONE: (909) 783-0101

ESTIMATED RAW EARTHWORK QUANTITIES

BASE SURFACE :	1510-0002 EG
COMPARISON SURFACE:	1510-0002 FG
CUT VOLUME (UNADJUSTED):	67,322 CY*
FILL VOLUME (UNADJUSTED):	22,932 CY*

*CONCEPTUAL GRADING ANTICIPATED TO BALANCE AFTER LOSSES.

NOTE: RAW EARTHWORK QUANTITIES ARE BASED UPON FINISHED SURFACE ELEVATIONS, AND DO NOT INCLUDE GEOTECHNICAL SOIL FACTORS OR SOIL DISPLACEMENTS FROM SITE IMPROVEMENTS.



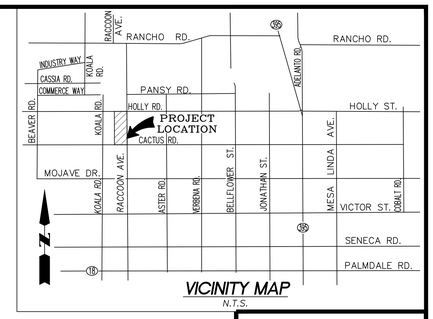
TYPICAL SECTION
MAJOR ARTERIAL
HOLLY ROAD - FACING EAST
NTS

TYPICAL SECTION
MAJOR COLLECTOR
RACCOON AVENUE - FACING NORTH
NTS

TYPICAL SECTION
MAJOR COLLECTOR
CACTUS ROAD - FACING EAST
NTS

LEGEND

- PROJECT BOUNDARY
- 1330 PROPOSED CONTOUR
- (1330) EXISTING CONTOUR
- PROPOSED FENCE
- 2.30% PROPOSED GRADE
- ℄ CENTERLINE
- R/W RIGHT OF WAY
- P.L. PROPERTY LINE
- GB GRADE BREAK
- TC TOP OF CURB
- EP EDGE OF PAVEMENT
- FS FINISH SURFACE
- FL FLOWLINE
- XX.XX PROPOSED ELEVATION
- (XX.XX) EXISTING ELEVATION
- PROPOSED PCC PAVING
- PROPOSED AC PAVEMENT
- PROPOSED 4" GRAVEL OVER 6" CLASS II BASE
- PROPOSED RIP-RAP



VICINITY MAP
N.T.S.

GRAPHIC SCALE
120 0 60 120 240
1" = 120'

CASC
Engineering and Consulting
1470 EAST COOLEY DRIVE, COLTON, CA 92324
PH: (909) 783-0101 FAX (909) 783-0108
www.cascinc.com

CONCEPTUAL GRADING PLAN

COPART RACOON 66

COPART INC.
APN 3128-341-01, 02, 04, 06
CITY OF ADELANTO

SEALS:

REGISTERED PROFESSIONAL ENGINEER
PATRICK C. FLANAGAN JR.
NO. C 086046
CIVIL
STATE OF CALIFORNIA

PREPARED FOR/APPLICANT:
COPART, INC.
ATTN: MR. CRAIG GARDNER
14185 DALLAS PARKWAY
DALLAS, TX 75254
(972) 564-5525

PROPERTY OWNER:
GOLDEN CITY LAND COMPANY, INC.
AND
THOMAS HSU AND CEVILIA WU

BENCHMARK:
A 3" BRASS DISK STAMPED "CITY OF ADELANTO B.M.-558" AT THE SOUTHEAST CORNER OF THE INTERSECTION OF HOLLY AND ASTER ROADS.
ELEVATION 3001.906' NGVD 29 1/1991

BASIS OF BEARING
CALIFORNIA STATE PLANE COORDINATE SYSTEM, NORTH ZONE (ZONE 5), NORTH AMERICAN DATUM OF 1983 SURVEY CONTROL CORS REFERENCE STATION DESIGNATION "BALDYMESA_CS2004 CORS ARP" PID "DH4099"AND "EL_MIRAGE_CS2008 CORS ARP" PID "DN7425".
BEING N37°01'44"W NAD 83 EPOCH 2010

CGP